



INV2



VRF Air Conditioning System



INV2 DC Inverter Multi VRF System with its high-efficient inverter compressors has four exciting features which are different from those found on traditional inverter air conditioners: excellent energy-saving effect, more reliable and precise operation, smarter network control, providing users with best air conditioning experience.

CONTENTS

- 05 INV2
- 25 INV2 Mini & Slim
- 33 INV2 Heat Recovery
- 44 Indoor Units
- 65 Control System
- 83 Energy Recovery Ventilation(ERV)

INV2



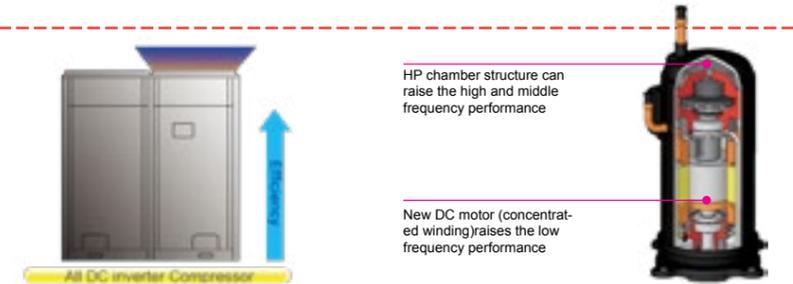
Key Features

All DC Inverter Technology to Improve Compression Efficiency

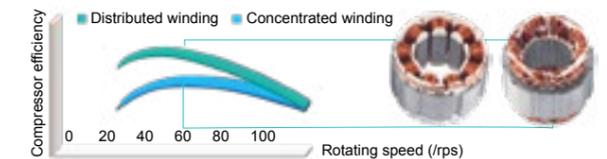
All DC inverter compressor and high-performance high pressure chamber are adopted to reduce loss of overheat and improve compression efficiency from direct intake. Compared with low pressure chamber, the compression efficiency is improved. High-efficient permasyon motor is adopted to provide better performance than traditional DC inverter compressor.

All DC Inverter Compressor

- All DC inverter compressor is used in this system. It can directly intake gas to reduce loss of overheat and improve efficiency.

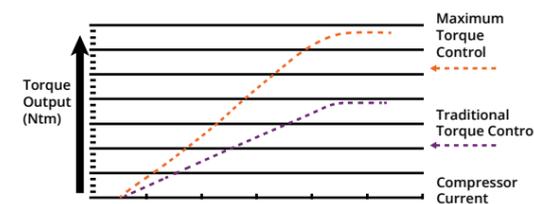


- High-efficient permasyon motor is adopted to provide better performance than traditional DC inverter compressor.



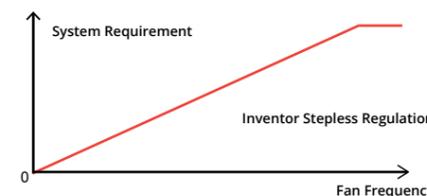
Technology of Maximum Torque Control with Minimum Current

It can reduce energy loss caused by device winding so as to realize higher efficiency.

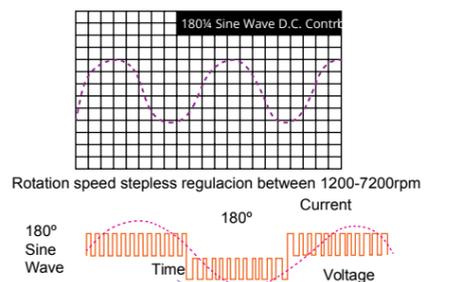
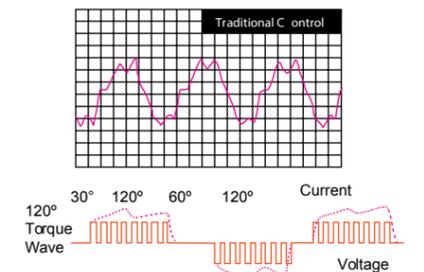


Low-frequency Torque Control

It can directly control motor torque, through which fan motor can run at a low speed. Users will feel more comfortable while requirements of the system are also met.

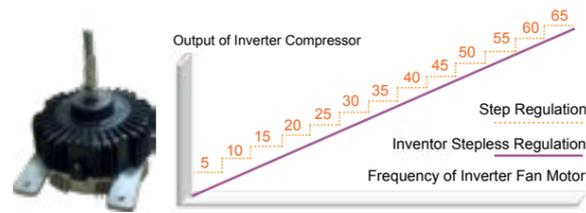


- 180° Sine Wave DC Speed Varying Technology. It can satisfy various places' demands for different temperature and is able to save a great deal of electricity and provide users with utmost comfort at the same time.

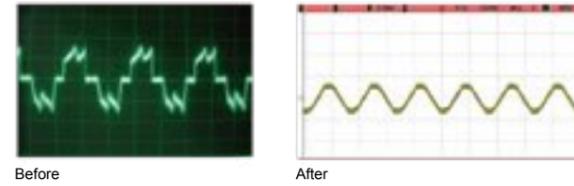


Sensorless DC Inverter Fan Motor

- Stepless speed regulation ranges from 5Hz to 65Hz. Compared with traditional inverter motors, the operation is more energy-saving.



- Sensorless control technology guarantees lower noise, less vibration and steadier operation.



88HP Max Capacity-The Largest Free Combination

Max capacity of single outdoor unit reaches **22HP** and max combination capacity is even up to **88HP**, in an industry leading level.

Max Combination capacity is extended to 88HP

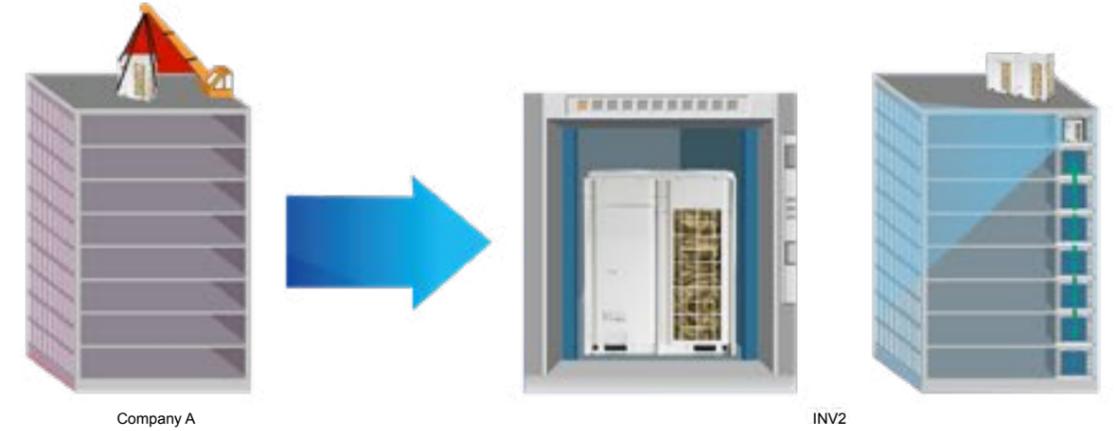


Money is saved in system cost and piping



Compact design

With compact design, the outdoor unit can be carried to the roof of building through elevator, with no need of crane. It is easier for delivery and installation.

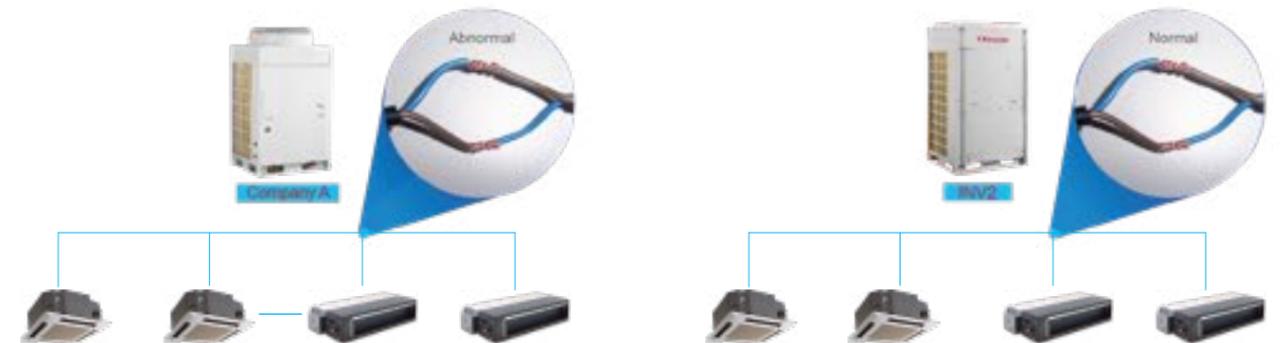


Non-polar CAN Technology to Improve Communication Efficiency

- Inventor is the first one to adopt non-polar CAN communication technology in the industry. CAN communication technology provides quicker system response speed, more convenient installation debugging and more reliable communication data.

Performance Index	Company A Multi-VRF Network	INV2 DC Inverter CAN Network
Reliability	Software check	Hardware check, more reliable
	One unit's communication error may lead to a breakdown of the whole network	If one unit has errors, it will exit from the network without any influence to other units.
Communication Efficiency	Low utilization	High utilization
	Communication speed is about 10Kbps.	Communication speed is 20Kbps
Compatibility	One main network, difficult to add new equipment	Multiple main networks, easy to add new equipment
Communication Distance	1500m	1500m

- The non-polar CAN communication technology is applied to support flexible wiring installation, greatly reducing construction difficulties.



Wide Range of Voltage and Operation Condition

Working voltage range of INV2 system has been improved to **320V~460V**, which surpasses the national standard of 342V~420V. For places with insteady voltage, this system can still be running well.



Outdoor operation temperature range is improved to **-5°C~52°C in cooling** and **-20°C~24°C in heating**.



Wide Applicable Location

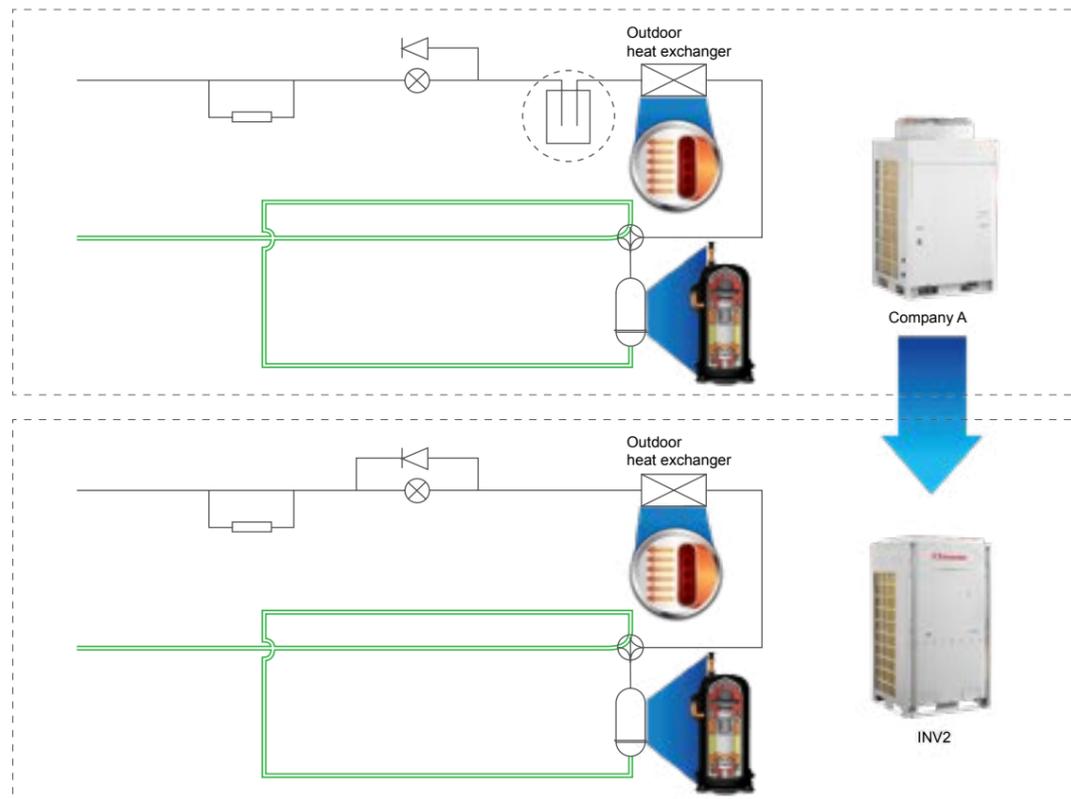
INV2 can realize a combination of 4 outdoor unit modules connecting with as many as **80** indoor units. It's especially applicable for business building or hotels.



Max.IDU Connection: **80** sets

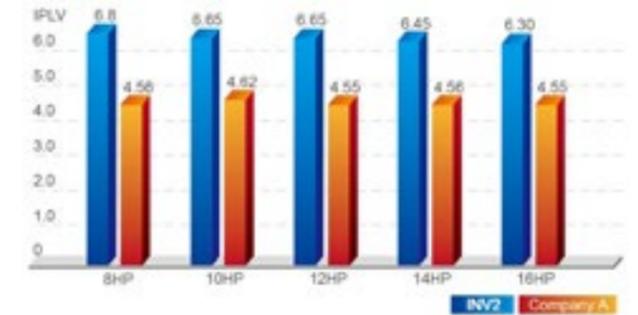
Refrigerant Storage and Distribution

The INV2 system is designed without liquid receiver and the excess refrigerant is stored in the piping, which can minimize the refrigerant charging volume and enhance the control accuracy of refrigerant.



High Efficiency and More Energy Saving

Thanks to the advanced all DC inverter technology, optimized system design and accurate intelligent control technology, IPLV of **INV2 All DC Inverter Multi VRF System** is up to 6.8.



New Generation of Energy-saving Operation Control Technology with Energy Saving Up to 20%

The **INV2** system has 2 modes for energy saving, which can be chosen to meet different electricity demands.

Mode 1:

In auto energy-saving mode, the system will self-adjust parameters according to the operation status, thus to lower the cost of electricity. Up to 15% of energy can be saved.

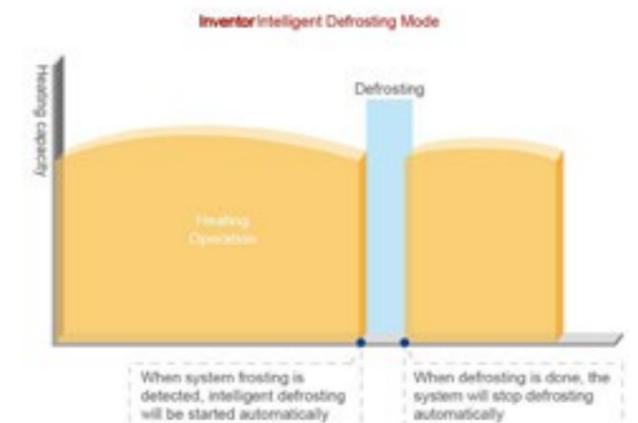
Mode 2:

In compulsory energy-saving mode, the system will limit power output forcibly. Up to 20% of energy can be saved.



Comfortable Heating

Advanced intelligent defrosting mode is adopted. Inverter advanced intelligent defrosting mode will choose the best defrosting way according to outdoor temperature and operation status to realize intelligent defrosting, effectively improving heating effect and performance. While in traditional defrosting mode, timing defrosting is adopted, which not only affects comfort but also reduces energy efficiency.



Accurate Intelligent Allocation Technology of Capacity and Output of Optimal Portion to Ensure Highest Efficiency

- When total load demands more than 75% of a running system's capacity, one more unit will automatically start;
- When total load demands less than 40% of a running system's capacity, one unit will automatically shut down;
- Therefore, each unit shares 40%-75% of the total load.
- Experiments show that an air conditioner costs the least energy when it's operating within 40%-75% of its capacity.

	Company A	Inventor INV
Allocation Method	10HP(full load) + 2HP(low load)	6HP(partial load) + 6HP(partial load)
Performance Compared	Unit costs more energy and may be soon damaged.	Unit costs less energy and can always be kept in good condition.

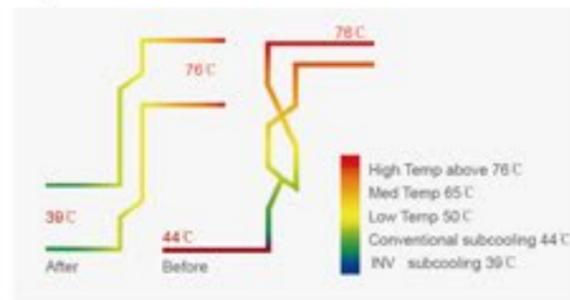
Output of Optimal Portion to Ensure Highest Efficiency

The best heating or cooling performance can be realized in the most energy-saving way. DC inverter compressor and DC inverter fan will also be operating in this way to ensure high efficiency.

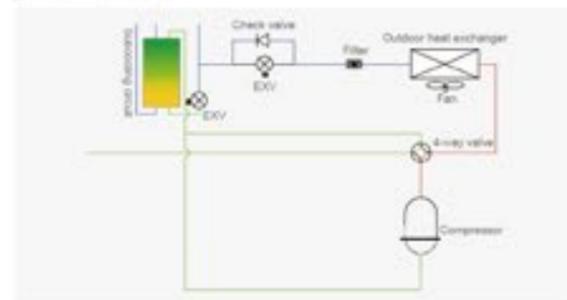


Sub-cooling Control Technology to Ensure Optimal Cooling and Heating

- Heat exchange loop can control the first subcooling process of heat exchanger. Subcooling degree can reach 11 C.



- Subcooling loop can realize 9 C second subcooling to guarantee cooling and heating performance.



Temperature Controlled by Wired Controller with Higher Efficiency and More Energy Saving

Through setting temperature lower limit in cooling or dry mode, and setting temperature upper limit in heating, 3D heating or heat supply mode, the system is able to operate in a smaller temperature range so as to achieve energy saving.

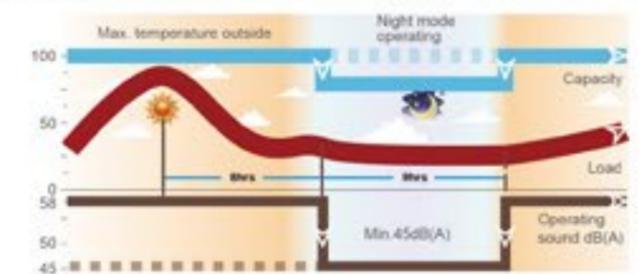
Comfortable Design for A Better Life

The INV2 system has a wide range of working conditions. Whether it's in a cool winter or a hot summer, normal operation is guaranteed with the least noise, making users feel more comfortable.

Outdoor Unit Quiet Mode and Quiet Control

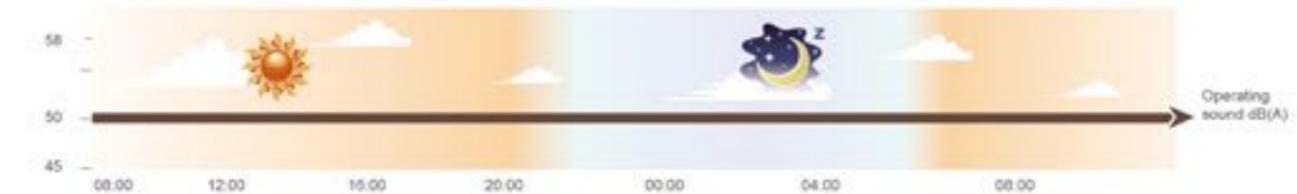
Quiet at night

The system can record the highest outdoor temperature. At night, the system will automatically turn to quiet mode. There are 9 quiet modes which can be set according to actual needs.



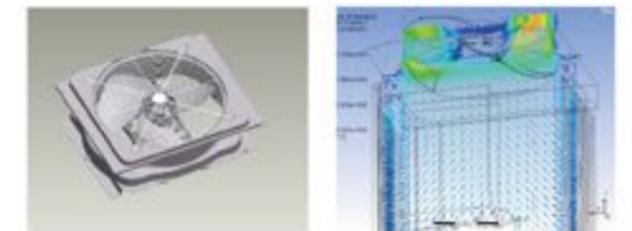
Quiet in compulsion

The system can also be set in this mode to ensure low noise as long as it is operating. Noise is as low as 45dB(A).



Quiet Control

- Optimized Bossing Design
After many times of CFD tests, a new fan bossing structure has been developed to reduce vibration of fan during running. Noise can be reduced by 3dB(A).



- Aerodynamics 3D Axial Fan
Compared with conventional fan, it can increase air volume by 12%, improving efficiency as well as lowering noise.



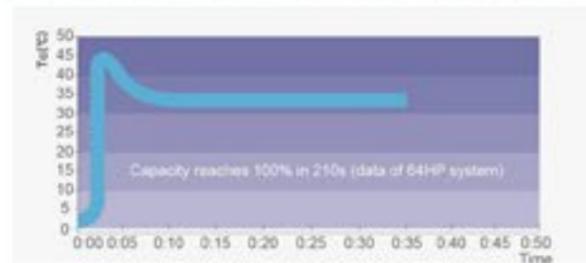
Quiet Indoor Unit

The indoor unit of the INV2 system also adopts DC inverter motors to realize stepless regulation. According to indoor temperature or people's needs, users can set this mode through wired controller. Noise is as low as 22dB(A).



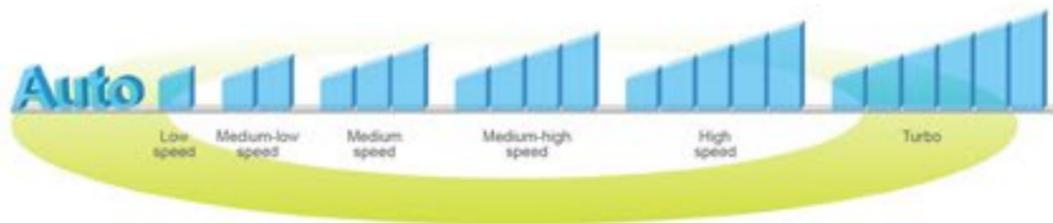
Fast Start-up in Heating

DC Compressor is first started to avoid too much electric current. Inverter compressor can operate in high frequency once starts up, so as to produce more heat.



7 Speeds Indoor Fan

Indoor fan speed can be set in 7 levels by wired controller. They are auto, low speed, medium-low speed, medium speed, medium-high speed, high speed and turbo. When the wired controller is on, press "FAN" button to set indoor fan speed circularly as below:

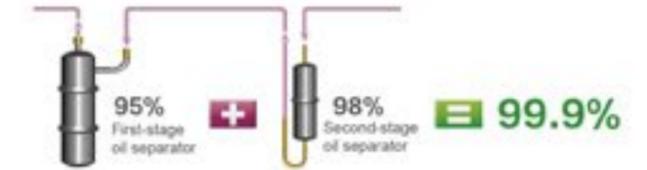


Excellent Performance Ensured by Advanced Technology

Through 10 years of research and development, Inverter INV2 has been further upgraded to a high level from electrical components, mechanical parts, control technology to communication technology.

Two-stage Oil Separation Control Technology (Patented)

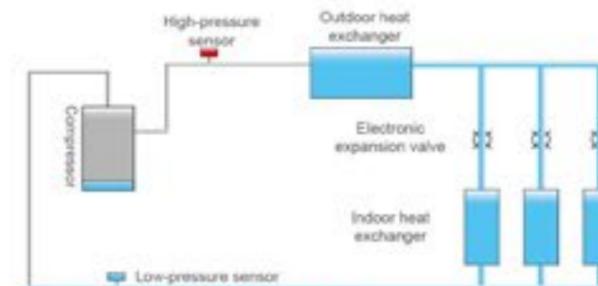
First-stage oil separator adopts a filtration expansion valve with separation efficiency of 98%; Second-stage oil separator will separate the remained 2% refrigerant oil with separation efficiency of 95%. General oil separation efficiency reaches 99.9%.



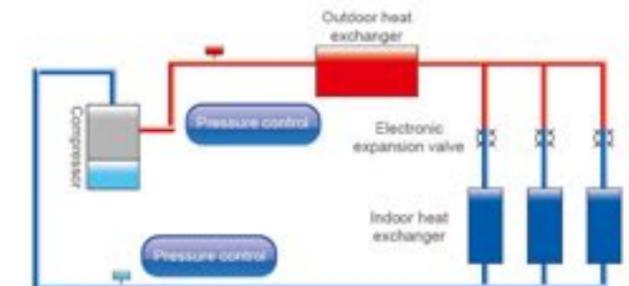
Oil Return Control Technology

New Oil Return Control

Inverter new oil return control technology effectively controls system oil return and oil storage status of each compressor, which greatly improves the operation lifespan of compressor.



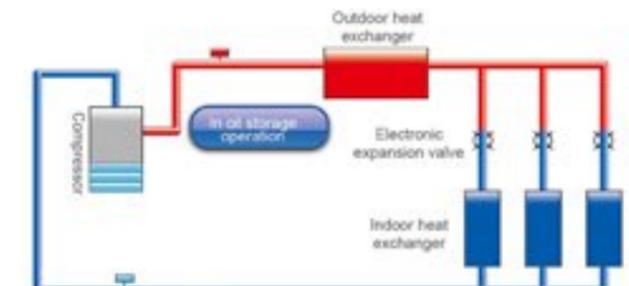
Oil storage status before oil return



Oil return operation

Specialized Compressor Oil Storage Control

The system applies specialized compressor oil storage technology, which can control the lowest oil level for compressor operation.

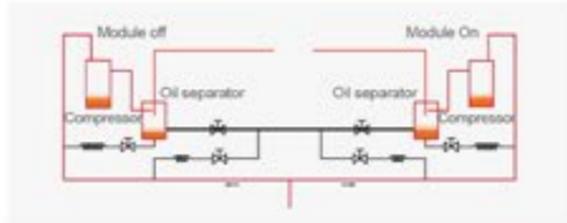


Oil storage operation

Oil Balance Control Technology

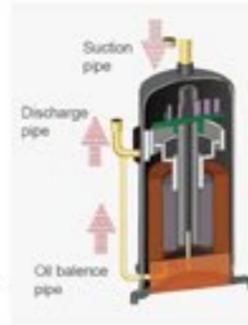
Oil Balance between Each Module

Based on the actual status of each module and compressor, the system can regulate compressor's operation and realize oil balance of each module.



Oil Balance between Each Compressor

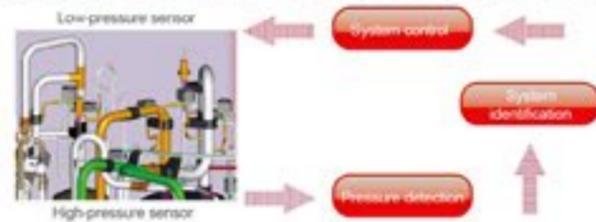
Refrigerant is taken into the compressor by the suction pipe and then runs through the cooling system. It can control the oil level and minimum oil volume required by each compressor so as to realize oil balance between each compressor.



Intelligent Detection Control

Pressure Sensor Detection Control

Pressure sensor can precisely detect system high pressure and low pressure, and adjust output of fan and compressor, so as to make sure the system can work under the most energy-saving pressure condition.

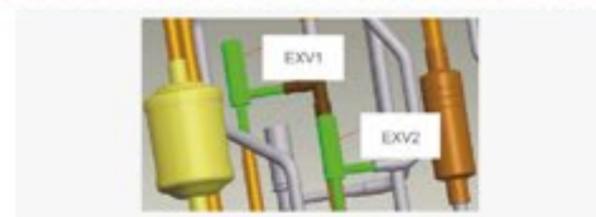


Temperature Sensor Detection Control

Various temperature sensors are equipped to detect ambient temperature, indoor temperature and refrigerant's evaporating temperature, from which the operation status can be measured.

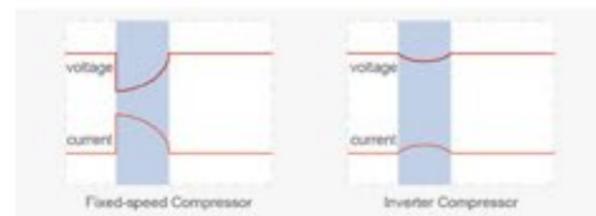
Multi Electronic Expansion Valves Control

Outdoor electronic expansion valve not only has throttling effect, but also control refrigerant flow. The system adopts multi electronic expansion valves control with total 960 grades regulated by two electronic expansion valves, so as to regulate refrigerant flow precisely and ensures reliable operation of system.



Smaller Impact to Power Grid

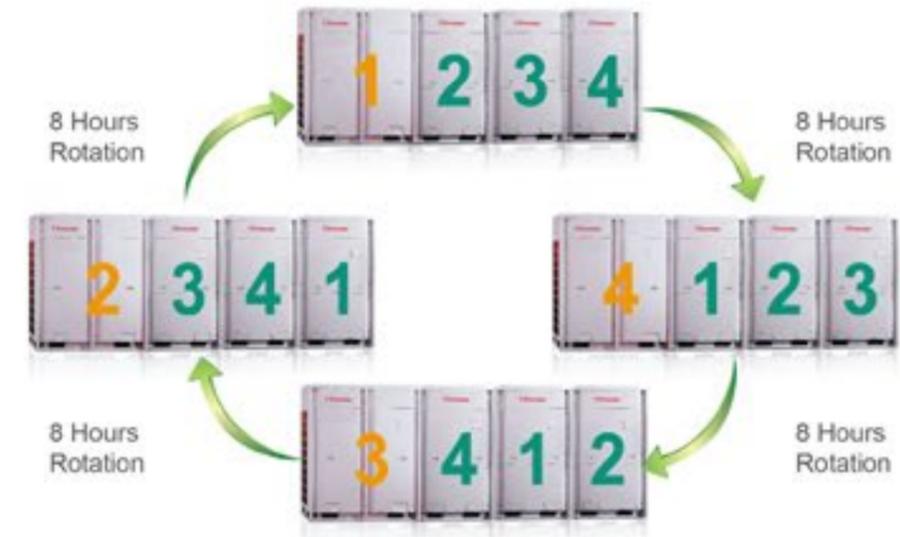
The start-up frequency of inverter compressor is gradually increased from 0Hz to the appointed operation frequency. The start-up current of compressor rotor is decreased by reducing load torque, hence impact to power grid during start-up is reduced and electromagnetic impact to compressor is reduced too.



Modules Rotation Operating to Maximize Lifespan

Modules 8h rotation operating

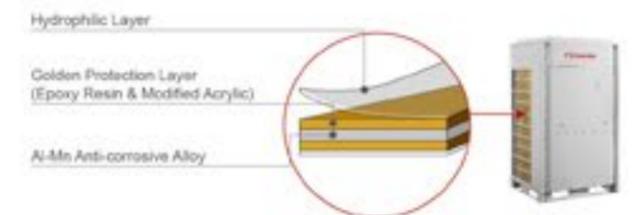
The operating priority sequence of the outdoor unit modules will be changed without restart when the system accumulatively operates for 8 hours, which can maximize the service life of the system.



Highly Anticorrosive Golden Fins

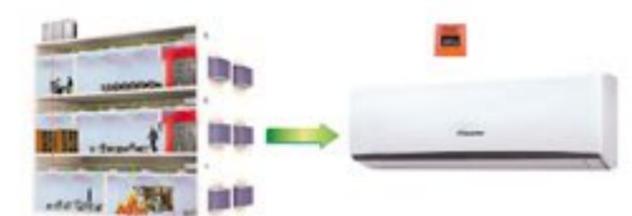
The primary material of Golden Fin is Al-Mn(Aluminum-Manganese) anti-rust alloy, which is coated with the Golden Protection Layer(Components: Epoxy Resin & Modified Acrylic, Silicon free), the anti-corrosive performance in salt-spray testing is 200%~300% higher than normal Blue Fin*.

Note: Salt-spray testing result is from INVENTOR materials chemistry testing laboratory.



Emergency Auto-Off Control

The outdoor unit can be linked with a fire alarm signal. In case of emergency, unit can automatically turn off to avoid risk or further loss.



Electricity Shortage Identification

The outdoor unit can receive a power signal of electricity shortage. In some places like first-class hotels, if diesel generator is used temporarily for providing electricity, outdoor unit will send the electricity shortage signal to indoor unit. In this case, only VIP rooms can be provided with air conditioning service.



Excellent Emergency Operation Function to Ensure Reliable Operation

Emergency Function

The INV2 system can realize a combination of 4 outdoor unit modules. When error is occurred to one of the modules, the others will perform the emergency operation to sustain the air conditioning.



Emergency Operation of Compressor

All the compressors in each single module are DC Inverter based, when one compressor has error, others will perform the emergency operation.



Emergency Operation of Fan

Double-fan design fan ensures that one fan can still work even if the other one has error.



Easy Installation for Various Kinds of Construction

ODU High Static Pressure Design

System has 4 levels of static pressure that can be set. Up to 82Pa pressure can be set for an outdoor unit. This design is especially useful when an outdoor unit needs to be placed indoor.

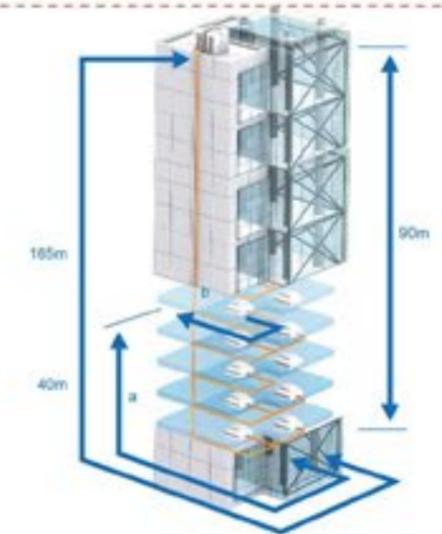


1000m Pipe Design for Flexible Installation

INV2 system can be applied in different types of building construction. One of its advantages is the simple pipe design, which will simplify the installation and reduce installation cost.

- Max total pipe length reaches 1000m (with limitation)
- Actual pipe length between the outdoor unit and the farthest indoor unit: 165m
- Max height difference between indoor unit and outdoor unit: 90m

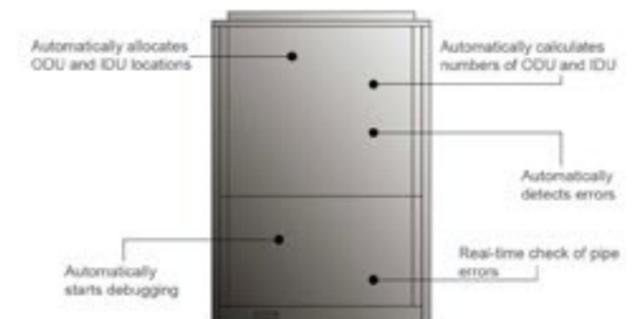
Note:
a: Distance between the first branch and the farthest indoor unit.
b: Distance between the first branch and the nearest indoor unit.
a-b≤40m



Intelligent Debugging for Convenient Construction

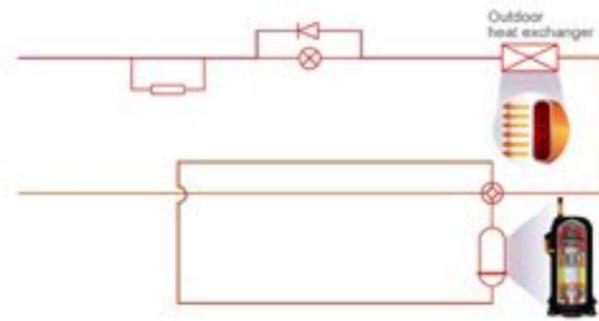
INV2 has five auto debugging features:

- Automatic allocation of IDU and ODU addresses
- Automatic detection of IDU and ODU quantity
- Automatic detection of errors
- Automatic start-up of debugging
- Real-time judgment of pipe errors



Auto-refrigerant Recovery for Easy Maintenance

When auto refrigerant recovery function is set and cut-off valve of liquid pipe is closed during maintenance, the system will automatically operate compressor, EXV, solenoid valve and fan, etc. Taking advantage of compressor power, the refrigerant is recovered at the condensing side of outdoor unit to achieve environmental effect. Meanwhile, system low pressure is displayed simultaneously during refrigerant recovery.



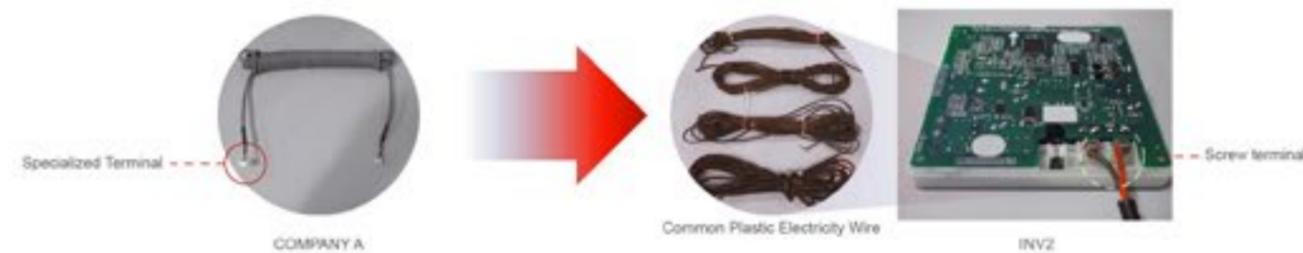
Inspection Window for Convenient Checking

Inspection window is available for quick checking of system operation status. No need to open panel for checking, which will be more time-saving and easier for maintenance.



Flexible Wiring

Common wire can meet the communication demand with no need of specialized communication wire. Common sheath twisted pair cable can be used as there is no polarity requirement.



Auto Addressing of Outdoor and Indoor Unit

CAN network is adopted to achieve auto addressing of outdoor and indoor unit. It can allocate IDU and ODU addresses and detect IDU and ODU quantity, which greatly improves construction efficiency.

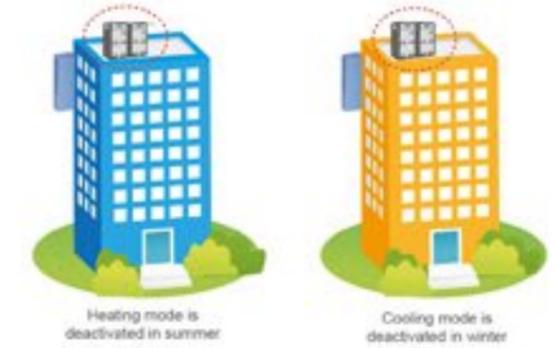


Professional Hotel Functions

Inventor INV2 provides hotels with unique season setting function and key-card control function.

Season Setting

Cooling or heating mode can be deactivated during a certain season to avoid affecting unit's normal operation due to mode conflict.



Key-card Control for Hotel Management

The unit can be turned on or off by inserting or removing the key-card. When the key-card is removed, the system can remember all the setting and stop operation. When the key-card is inserted back, the system will be under standby mode or operate according to the status before removing key-card. It is well suited to hotels, restaurants, etc.



SPECIFICATIONS & PARAMETER OF OUTDOOR UNITS

Outdoor Units Lineup

Model	INV2-224M1T (8HP)	INV2-280M1T (10HP)	INV2-335M1T (12HP)	INV2-400M1T (14HP)	INV2-450M1T (16HP)	INV2-504M1T (18HP)	INV2-560M1T (20HP)	INV2-615M1T (22HP)
INV2-224M1T	●							
INV2-280M1T		●						
INV2-335M1T			●					
INV2-400M1T				●				
INV2-450M1T					●			
INV2-504M1T						●		
INV2-560M1T							●	
INV2-615M1T								●
INV2-680M1T		●		●				
INV2-730M1T		●			●			
INV2-785M1T		●				●		
INV2-850M1T		●					●	
INV2-900M1T		●						●
INV2-960M1T			●					●
INV2-1010M1T				●				●
INV2-1065M1T					●			●
INV2-1130M1T						●		●
INV2-1180M1T							●	●
INV2-1235M1T								●●
INV2-1300M1T		●			●			●
INV2-1350M1T		●			●			●
INV2-1410M1T			●		●			●
INV2-1460M1T		●				●		●
INV2-1515M1T		●						●●●
INV2-1580M1T			●					●●●
INV2-1630M1T				●				●●●
INV2-1685M1T					●			●●●
INV2-1750M1T						●		●●●
INV2-1800M1T							●	●●●
INV2-1845M1T								●●●●
INV2-1908M1T		●			●			●
INV2-1962M1T		●				●		●
INV2-2016M1T		●					●	●
INV2-2072M1T		●					●	●●
INV2-2128M1T		●						●●●
INV2-2184M1T			●					●●●●
INV2-2240M1T				●				●●●●
INV2-2295M1T					●			●●●●
INV2-2350M1T						●		●●●●
INV2-2405M1T							●	●●●●
INV2-2460M1T								●●●●●

Specifications of Outdoor Units

380~415V,50/60Hz

Model		INV2-224M1T	INV2-280M1T	INV2-335M1T	INV2-400M1T	INV2-450M1T	INV2-504M1T ¹	INV2-560M1T ¹	INV2-615M1T ¹
Capacity range	HP	8	10	12	14	16	18	20	22
Capacity	Cooling	kW	22.4	28	33.5	40	45	50.4	61.5
	Heating	kW	25	31.5	37.5	45	50	56	63
EER	kW/kW	4.31	4	3.98	3.76	3.56	3.38	2.97	2.75
COP	kW/kW	4.55	4.32	4.17	4.05	3.85	3.84	3.6	3.16
Power supply	V/Ph/Hz	380-415V-3Ph-50/60Hz							
Max. Circuit/Fuse Current	A	15.7/20	20.9/25	24.7/32	28.8/40	33.2/40	36.8/40	43.8/50	48.9/50
Power consumption	Cooling	kW	5.2	7	8.41	10.65	12.65	14.9	18.9
	Heating	kW	5.5	7.3	9	11.1	13	14.6	17.5
Maximum drive IDU NO.	unit	13	16	19	23	26	31	34	38
Refrigerant Charge volume	kg	5.9	6.7	8.2	9.8	10.3	12.7	13	13.5
Sound pressure level	dB(A)	60	61	63	63	63	65	66	66
Connecting pipe	Liquid	mm	Φ9.52		Φ12.7		Φ15.9		
	Gas	mm	Φ19.05	Φ22.2	Φ25.4		Φ28.6		
	Oil balance	mm	Φ9.52						Φ9.52
Dimension (WxDxH)	Outline	mm	930x765x1605		1340x765x1605		1340x765x1740		
	Package	mm	1010x840x1775		1420x840x1775		1420x840x1910		
Net weight/Gross weight	kg	225/235	225/235	285/300	360/375	360/375	400/415	400/415	400/415
Loading quantity	40' GP	set	24	24	16	16	16	16	16
	40' HQ	set	24	24	16	16	16	16	16

Specifications of ODU Combination

380~415V,50/60Hz

Model	Power Supply	Capacity		Power Input		Dimension (WxDxH)	Airflow Volume	ESP	Sound Pressure Level	Operation sound pressure level at night	Connecting pipe diameter			Min. circuit current	Max. fuse current	Weight
		Cooling kW	Heating kW	Cooling kW	Heating kW						Liquid mm	Gas mm	Oil Balance mm			
INV2-680M1T	380-415V-3Ph-50/60Hz	68	76.5	17.65	18.4	(930x765x1605) +(1340x765x1605)	11400+14000	82	65	43	Φ15.9	028.6	09.52	54.1	63	225+360
INV2-730M1T		73	81.5	19.65	20.3	(930x765x1605) +(1340x765x1605)	11400+14000	82	65	43	Φ19.05	031.8	09.52	57.9	63	225+360
INV2-785M1T		78.4	88	21.2	21.4	(930x765x1605) +(1340x765x1740)	11400+16000	82	66	43	Φ19.05	031.8	09.52	65.6	80	225+360
INV2-850M1T		84	94.5	23	23.9	(930x765x1605) +(1340x765x1740)	11400+16000	82	67	43	Φ19.05	031.8	09.52	71	80	225+385
INV2-900M1T		89.5	100.5	25.5	26.2	(930x765x1605) +(1340x765x1740)	11400+16000	82	67	43	Φ19.05	031.8	09.52	72.7	80	225+385
INV2-960M1T		95	106.5	26.91	27.9	(1340x765x1605) +(1340x765x1740)	14000+16000	82	68	43	Φ19.05	031.8	09.52	76.5	80	285+385
INV2-1010M1T		101.5	114	29.15	30	(1340x765x1605) +(1340x765x1740)	14000+16000	82	68	43	Φ19.05	038.1	09.52	80.6	100	360+385
INV2-1065M1T		106.5	119	31.15	31.9	(1340x765x1605) +(1340x765x1740)	14000+16000	82	68	43	Φ19.05	038.1	09.52	85	100	360+385
INV2-1130M1T		111.9	125.5	32.7	33	(1340x765x1740) x2	16000x2	82	68	43	Φ19.05	038.1	09.52	96.5	100	360+385
INV2-1180M1T		117.5	132	34.5	35.5	(1340x765x1740) x2	16000x2	82	69	43	Φ19.05	038.1	09.52	101.9	125	385+385
INV2-1235M1T		123	138	37	37.8	(1340x765x1740) x2	16000x2	82	69	43	Φ19.05	038.1	09.52	103.6	125	385+385
INV2-1300M1T		129	144.5	35.65	36.9	(930x765x1605) +(1340x765x1605) +(1340x765x1740)	11400+14000+16000	82	69	45	Φ19.05	038.1	09.52	104.2	125	225+360+385
INV2-1350M1T		134.5	150.5	38.15	39.2	(930x765x1605) +(1340x765x1605) +(1340x765x1740)	11400+14000+16000	82	69	45	Φ19.05	038.1	09.52	105.9	125	225+360+385
INV2-1410M1T		140	156.5	39.56	40.9	(1340x765x1605) x2+(1340x765x1740)	14000x2+16000	82	69	45	Φ19.05	041.3	09.52	109.7	125	285+360+385
INV2-1460M1T		145.5	163.5	41.5	42.8	(930x765x1605) +(1340x765x1740) x2	11400+16000x2	82	69	45	Φ19.05	041.3	09.52	122.8	125	225+385x2
INV2-1515M1T		151	169.5	44	45.1	(930x765x1605) +(1340x765x1740) x2	11400+16000x2	82	70	45	Φ19.05	041.3	09.52	124.5	125	225+385x2
INV2-1580M1T		156.5	175.5	45.41	46.8	(1340x765x1605) +(1340x765x1740) x2	14000+16000x2	82	70	45	Φ19.05	041.3	09.52	128.3	160	285+385x2
INV2-1630M1T		163	183	47.65	48.9	(1340x765x1605) +(1340x765x1740) x2	14000+16000x2	82	70	45	Φ19.05	041.3	09.52	132.4	160	360+385x2
INV2-1685M1T		168	188	49.65	50.8	(1340x765x1605) +(1340x765x1740) x2	14000+16000x2	82	70	45	Φ19.05	041.3	09.52	136.8	160	360+385x2
INV2-1750M1T		173.4	194.5	51.2	51.9	(1340x765x1740) x3	16000x3	82	70	45	Φ19.05	041.3	09.52	148.3	160	360+385x2
INV2-1800M1T		179	201	53	54.4	(1340x765x1740) x3	16000x3	82	71	45	Φ19.05	041.3	09.52	153.7	160	385x3
INV2-1845M1T		184.5	207	55.5	56.7	(1340x765x1740) x3	16000x3	82	71	45	Φ19.05	041.3	09.52	155.4	160	385x3
INV2-1908M1T		190.5	213.5	54.15	55.8	(930x765x1605) +(1340x765x1605) +(1340x765x1740) x2	11400+14000+16000x2	82	72	47	Φ22.2	044.5	09.52	156	160	225+360+385x2
INV2-1962M1T		195.9	220	55.7	56.9	(930x765x1605) +(1340x765x1740) x3	11400+16000x3	82	73	47	Φ22.2	044.5	09.52	167.5	200	225+360+385x2
INV2-2016M1T		201.5	226.5	57.5	59.4	(930x765x1605) +(1340x765x1740) x3	11400+16000x3	82	73	47	Φ22.2	044.5	09.52	172.9	200	225+385x3
INV2-2072M1T		207	232.5	60	61.7	(930x765x1605) +(1340x765x1740) x3	11400+16000x3	82	73	47	Φ22.2	044.5	09.52	174.6	200	225+385x3
INV2-2128M1T		212.5	238.5	62.5	64	(930x765x1605) +(1340x765x1740) x3	11400+16000x3	82	73	47	Φ22.2	044.5	09.52	176.3	200	225+385x3
INV2-2184M1T		218	244.5	63.91	65.7	(1340x765x1605) +(1340x765x1740) x3	14000+16000x3	82	74	47	Φ22.2	044.5	09.52	180.1	200	285+385x3
INV2-2240M1T		224.5	252	66.15	67.8	(1340x765x1605) +(1340x765x1740) x3	14000+16000x3	82	74	47	Φ22.2	044.5	09.52	184.2	200	360+385x3
INV2-2295M1T		229.5	257	68.15	69.7	(1340x765x1605) +(1340x765x1740) x3	14000+16000x3	82	74	47	Φ22.2	044.5	09.52	188.6	200	360+385x3
INV2-2350M1T	234.9	263.5	69.7	70.8	(1340x765x1740) x4	16000x4	82	75	47	Φ22.2	044.5	09.52	200.1	250	360+385x3	
INV2-2405M1T	240.5	270	71.5	73.3	(1340x765x1740) x4	16000x4	82	75	47	Φ22.2	044.5	09.52	205.5	250	385x4	
INV2-2460M1T	246	276	74	75.6	(1340x765x1740) x4	16000x4	82	75	47	Φ22.2	044.5	09.52	207.2	250	385x4	

INV2 Mini & Slim



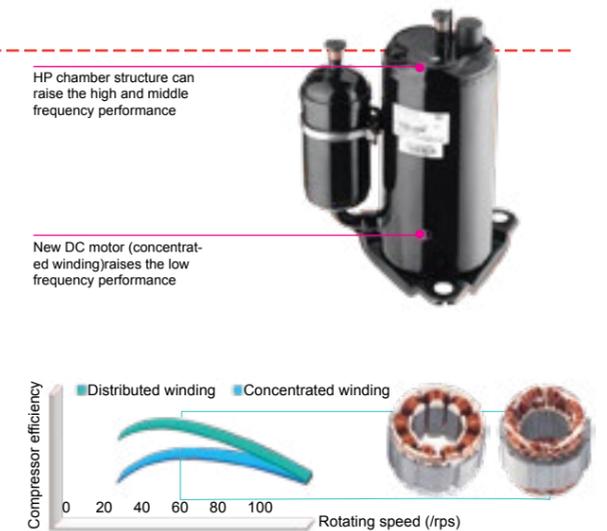
Key Features

All DC Inverter Technology to Improve Compression Efficiency

All DC inverter compressor and high-performance high pressure chamber are adopted to reduce loss of overheat and improve compression efficiency from direct intake. Compared with low pressure chamber, the compression efficiency is improved. High-efficient permasyon motor is adopted to provide better performance than traditional DC inverter compressor.

All DC Inverter Compressor

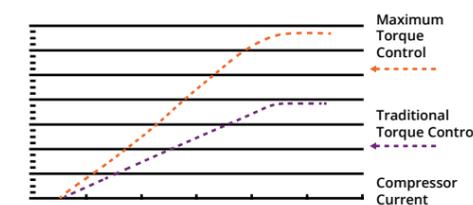
- All DC inverter compressor is used in this system. It can directly intake gas to reduce loss of overheat and improve efficiency.



- High-efficient permasyon motor is adopted to provide better performance than traditional DC inverter compressor.

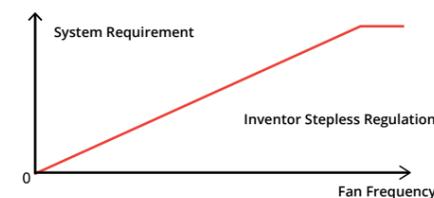
Technology of Mximum Torque Control with Minimum Current

It can reduce energy loss caused by device winding so as to realize higher efficiency.

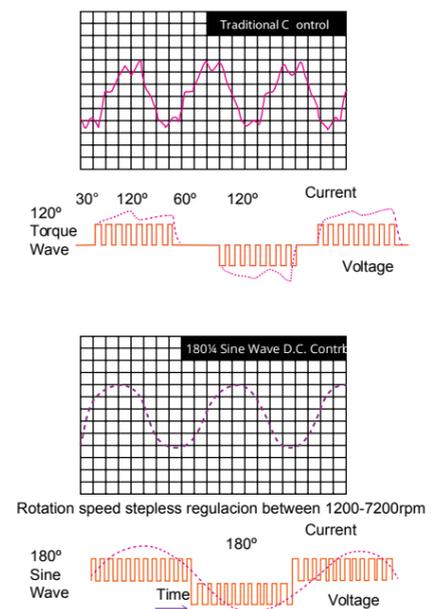


Low-frequency Torque Control

It can directly control motor torque, through which fan motor can run at a low speed. Users will feel more comfortable while requirements of the system are also met.

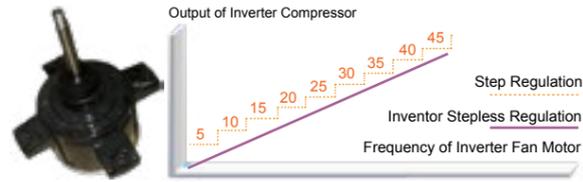


- 180° Sine Wave DC Speed Varying Technology. It can satisfy various places' demands for different temperature and is able to save a great deal of electricity and provide users with utmost comfort at the same time.

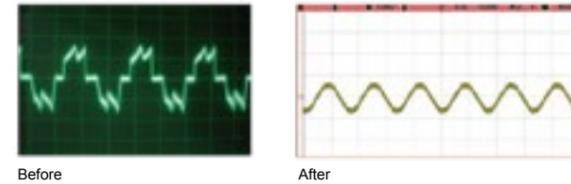


Sensorless DC Inverter Fan Motor

- Stepless speed regulation ranges from **5Hz** to **44Hz**. Compared with traditional inverter motors, the operation is more energy-saving.

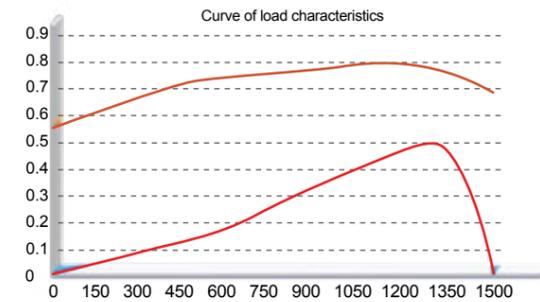


- Sensorless control technology guarantees lower noise, less vibration and steadier operation.



Sensorless DC Inverter Fan Motor

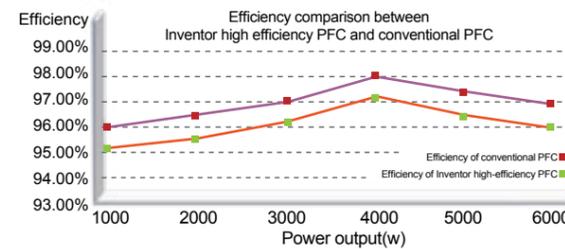
The indoor unit adopts high-efficiency brushless DC motor. Compared with conventional motor, the efficiency of brushless DC motor is improved by more than **30%**. Meanwhile, the design of evaporation capacity flow is optimized through emulation software of refrigeration system and the heat exchange amount of evaporator is greatly improved.



High-efficiency Digital PFC Control*

High-efficiency PFC control technology is adopted with efficiency improved by about 1% compared with conventional PFC. For the air conditioner with rated power of 5kW, **50W** of electricity can be saved every hour and **1.2kW** of electricity can be saved every day.

*This feature applicable for INV2 Mini only.



Wider Operation Condition Range

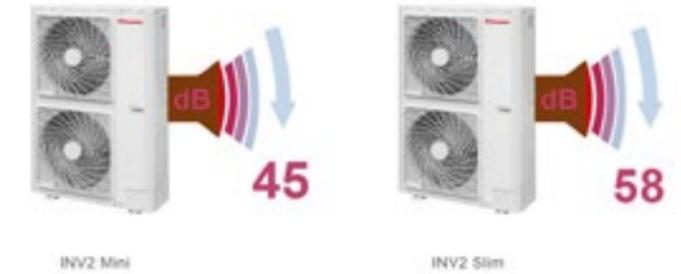
The unit adopts DC motor with more accurate high pressure control, which effectively solves the high pressure control problem in low ambient temperature cooling. So the operation range in cooling is wider.

Company A	Inventor INV2 Mini	Inventor INV2 Slim
Cooling: 10~48°C Heating: -20~27°C	Cooling: -5~48°C Heating: -20~27°C	Cooling: -5~50°C Heating: -20~27°C

Comfortable and Quiet Mode

Low Noise of Outdoor Unit

- The advanced sub-cooling control technology is applied to reduce the liquid flow noise of indoor unit in cooling operation.
- Noise of outdoor unit can be as low as 45dB thanks to noise optimized design of fan system and compressor system, and multiple kinds of quiet modes of outdoor unit.

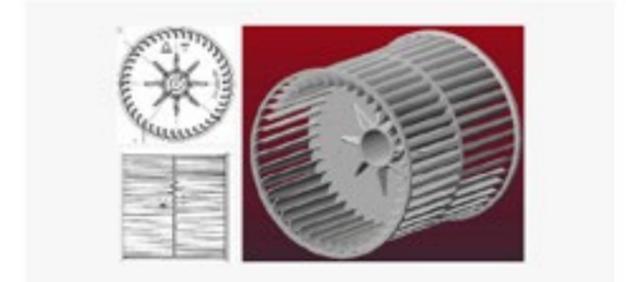


Low Noise of Indoor Unit

- The pioneering and patented high-efficiency centrifugal fan blade and low-noise volute are adopted. Meanwhile, the imported silent valve is adopted to reduce noise of entire unit as low as 22db(A).



- By adopting the optimal inlet angle of centrifugal fan blade and optimal diameter ratio between internal and external circles of impeller, the air volume is increased and fan noise is decreased greatly.



- The advanced supercooling control technology and the oil-return technology under heating mode has efficiently solved the problem of liquid flow noise of indoor unit, which improved the sound quality of indoor unit.

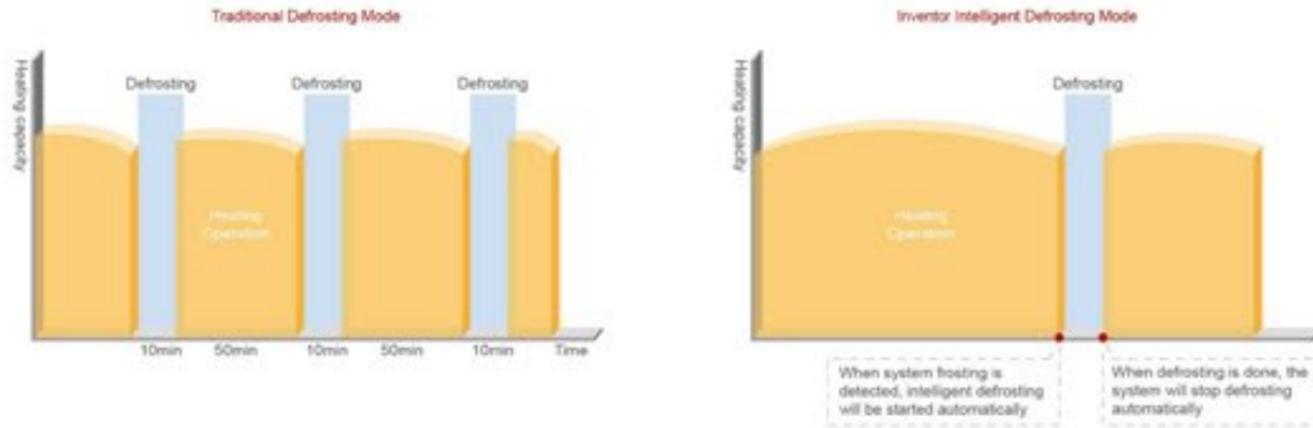
Intelligent Temperature Control Technology

Intelligent temperature control technology is adopted for super fast cooling or heating, so that indoor temperature will reach set temperature more quickly.



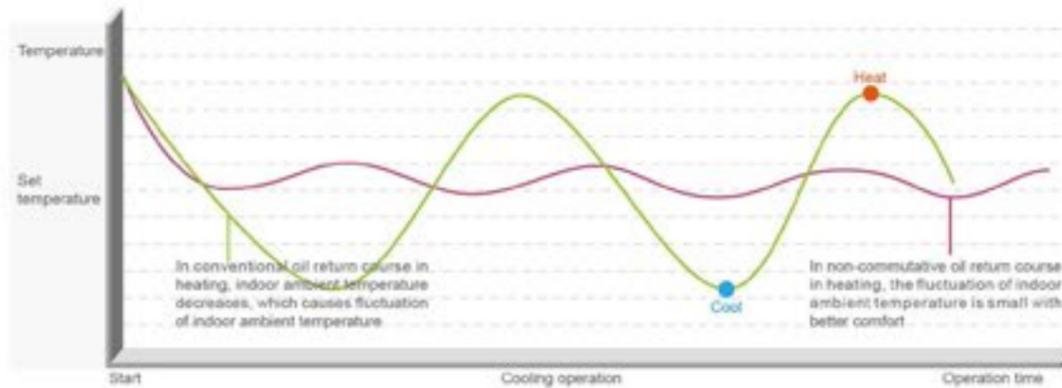
Comfortable Heating

Advanced intelligent defrosting mode is adopted. Inverter advanced intelligent defrosting mode will choose the best defrosting way according to outdoor temperature and operation status to realize intelligent defrosting, effectively improving heating effect and performance. While in traditional defrosting mode, timing defrosting is adopted, which not only affects comfort but also reduces energy efficiency.



Non-commutative Oil Return Technology in Heating

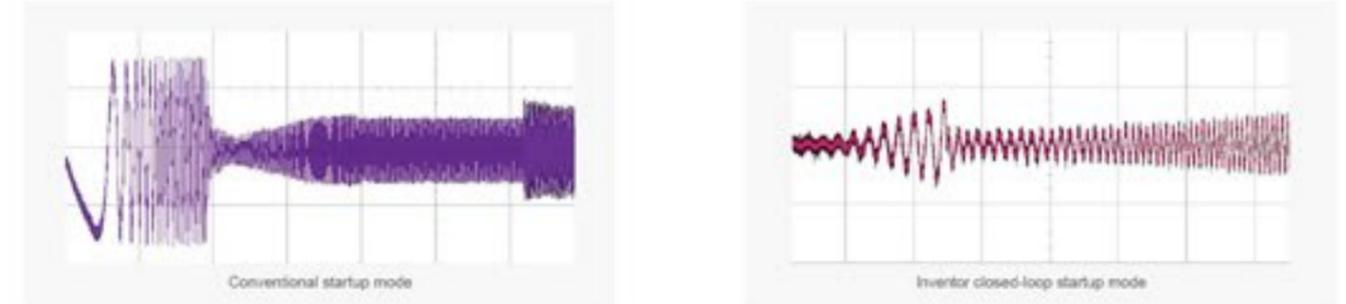
The unit can achieve non-commutative oil return in heating when outdoor ambient temperature is within 0~20°C. Thanks to this technology, indoor ambient temperature is more stable and comfort is improved in heating mode.



Reliable Operation

Compressor Closed-loop Startup Technology with More Reliable Startup

The self-innovative closed-loop startup control technology is adopted. Thanks to this technology, the startup current is small and startup is more reliable.



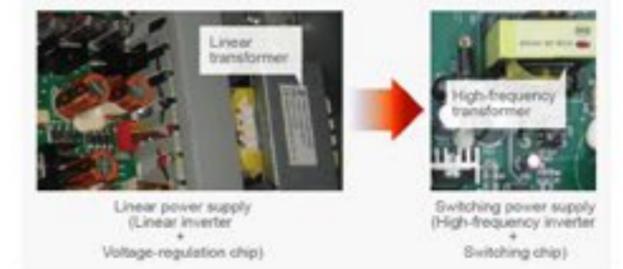
High Anti-interference Ability

The latest CAN bus communication technology is adopted, with non-polar communication and high anti-interference ability. Common communication wire can meet the communication demand with no need of specialized shielded wire. The customers can buy the communication wire by themselves, greatly reducing installation difficulties.



Advanced High-frequency Transformer with More Stable Voltage

- The advanced switching power supply is adopted with lower power consumption and higher power efficiency.
- Wide voltage-regulation range ensures stable voltage output when the voltage of grid fluctuates.
- Compared with conventional transformer, the size of high-frequency transformer is small and the weight is light.



Ultra-long Connection Pipe for More Convenient Connection

Under the subcooling control technology gained by adding subcooler, the indoor unit and outdoor unit of INV2 mini can operate reliably with longer connection pipe.

	Company A	Inverter INV2 Slim	Inverter INV2 Mini
Total piping length	150m	300m	300m
Equivalent piping length	70m	100m	150m

Top Advanced Light and Compact Size

INV2 slim adopts small and compact size design. The dimension of the unit is 1430(H)×940(W)×320(D). Compared with the normal product with the same capacity, size and weight are reduced a lot.



Easy Installation with Lower Construction Cost

The outdoor unit of INV2 slim is with small size and light weight. No need fork lifter and crane for movement and installation



Movement by Stairs and Elevator

The outdoor unit of INV2 slim is with compact and small size for saving space and easy movement. It can be carried by elevator or stairs.

INV2 Mini & Slim Line Up

Mini Line up

HP	Model	Product Outlook
4	INV2-H120N1S	
5	INV2-H140N1S	
6	INV2-H160N1S	

Slim Line up

HP	Model	Product Outlook
8	INV2-H224N1T	
10	INV2-H280N1T	
12	INV2-H335N1T	

Mini

50/60 Hz

Model			INV2-H120N1S**	INV2-H140N1S**	INV2-H160N1S**
Capacity range	HP		4	5	6
Capacity	Cooling	kW	12.1	14	16
	Heating	kW	14	16.5	18.5
EER	W/W		3.97	3.52	3.3
COP	W/W		4.28	4.14	3.98
Power supply		V/Ph/Hz	220-240V-1Ph-50Hz&208-230V-1Ph-60Hz		
Max. Circuit/Fuse Current	A		28.1/32	31.8/32	33.6/40
Power consumption	Cooling	kW	3.05	3.98	4.85
	Heating	kW	3.27	3.99	4.87
Maximum drive IDU NO.	unit		7	8	9
Refrigerant Charge volume	kg		5	5	5
Sound pressure level	dB(A)		55	56	58
Connecting pipe	Liquid	mm	Φ9.52		
	Gas	mm	Φ15.87		
Dimension (W*D*H)	Outline	mm	908*340*1345		
	Package	mm	908*458*1515		
Net weight/Gross weight	kg		110/120		110/120
Loading quantity	40' GP	set	57	57	57
	40' HQ	set	57	57	57

*1. This series outdoor unit cannot match with US air handler, fresh air processing unit and high static ESP duct type unit.

Slim

50/60 Hz

Model			INV2-H224N1T	INV2-H280N1T	INV2-H335N1T
Capacity range	HP		8	10	12
Capacity	Cooling	kW	22.4	28.0	33.5
	Heating	kW	25.0	31.5	37.5
EER	W/W		3.1	2.97	3.04
COP	W/W		4.1	3.66	3.60
IPLV	Cooling	W/W	6.1	6.0	6.0
Power supply		V/Ph/Hz	380-415-3Ph-50/60Hz		
Max. Circuit/Fuse Current	A		25	25	25
Power consumption	Cooling	kW	7.2	9.4	11.0
	Heating	kW	6.1	8.6	10.4
Maximum drive IDU NO.	unit		13	17	20
Refrigerant Charge volume	kg		5.5	7.5	8.0
Sound pressure level	Cooling	dB(A)	58	59	60
	Heating	dB(A)	59	60	61
Connecting pipe	Liquid	mm	Φ9.52	Φ12.7	Φ12.7
	Gas	mm	Φ19.05	Φ25.4	Φ25.4
Dimension (W*D*H)	Outline	mm	940*320*1430	940*460*1615	940*460*1615
	Package	mm	1033*433*1580	1033*573*1765	1033*573*1765
Net weight/Gross weight	kg		133/144	160/175	175/185
Loading quantity	40' GP	set	54	44	44
	40' HQ	set	54	44	44

Note:
 ① Testing conditions of rated cooling capacity: indoor 27°CDB/19°CWB, outdoor 35°CDB, connection pipe length of 5m, no height difference between units.
 ② Testing conditions of rated heating capacity: indoor 20°CDB, outdoor 7°CDB/6°CWB, connection pipe length of 5m, no height difference between units.
 ③ The total indoor unit capacity shall be within 50% to 130% of outdoor unit capacity. Correction of other parameters can be referred to the unit capacity correction sheet.
 ④ The above-mentioned parameters are tested with standard connection pipe length. In actual engineering, please arrange correction according to the capacity correction with long connection pipe.

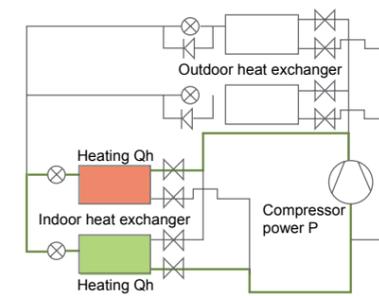
INV2 Heat Recovery



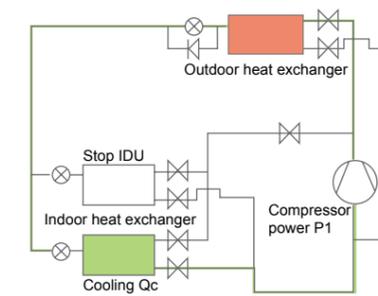
Key Features

High Efficiency

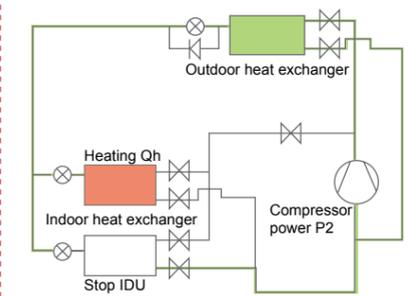
INV2 Heat Recovery System embodies the excellent features of INV2 (DC inverter technology, DC fan linkage control, precise control of capacity output, balancing control of refrigerant, original oil balancing technology with high pressure chamber, high-efficiency output control, low-temperature operation control technology, super heating technology, high adaptability for project, environmental refrigerant). Its energy efficiency is improved by 78% compared with conventional multi VRF.



ECOP of heat recovery system
 $\xi = (13.0 + 17.0) / 4.5 = 6.67$



EER of common system
 $\xi_1 = 13.0 / 3.0 = 4.33$



COP of common system
 $\xi_2 = 17.0 / 5.0 = 3.4$

When the cooling capacity and heating capacity of common system are equivalent to the capacity of heat recovery system, its energy efficiency ratio is:

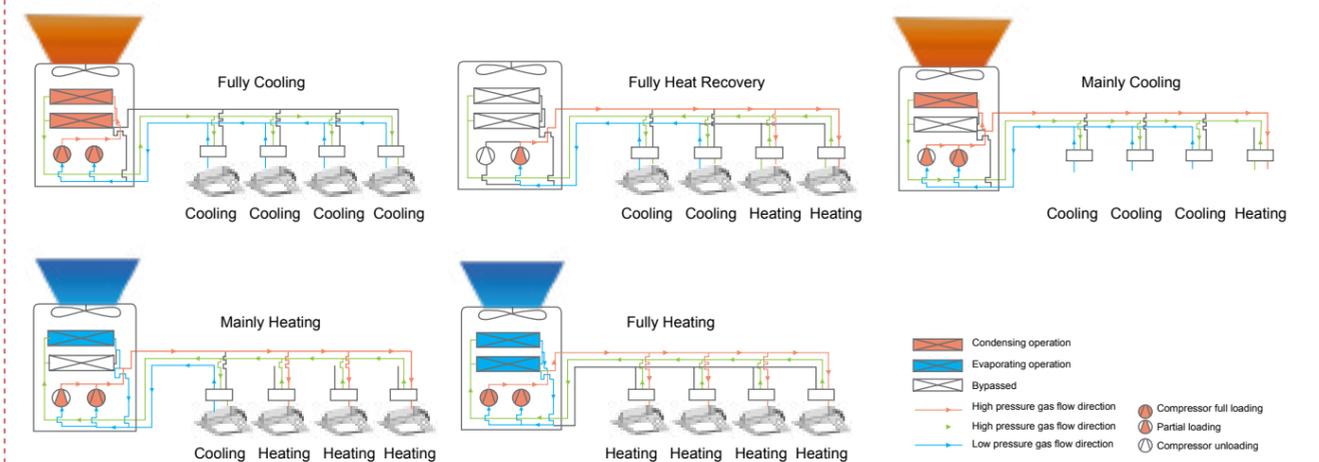
$\xi_2 = (13.0 + 17.0) / (3.0 + 5.0) = 30.0 / 8.0 = 3.75$

The energy efficiency ratio of heat recovery system is higher than common system:

$(6.67 - 3.75) \times 100\% / 3.75 = 78\%$

Note: Working conditions of above-mentioned test: outdoor temperature 7°C/6°C, indoor temperature in cooling 27°C/19°C, indoor temperature in heating 20°C/15°C.

Five Efficient Operation Modes

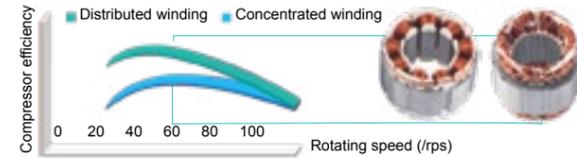


All DC Inverter Technology to Improve Compression Efficiency

- All DC inverter compressor is used in this system. It can directly intake gas to reduce loss of over-heat and improve efficiency.



- High-efficient permasyon motor is adopted to provide better performance than traditional DC inverter compressor.



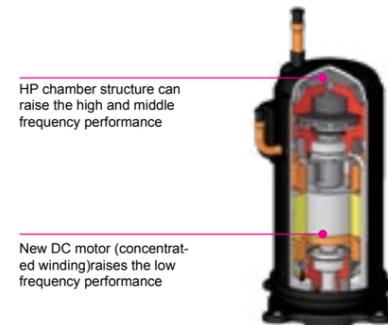
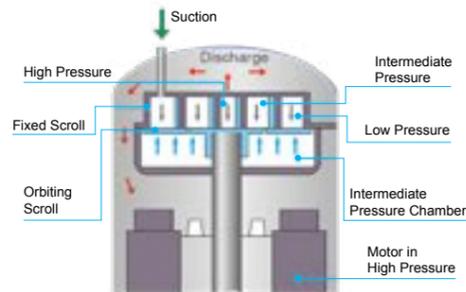
High Pressure Chamber Design

What's high pressure chamber?

The low temperature and low pressure refrigerant gas inhaled from the suction inlet of compressor will change to high-temperature and high-pressure gas after compression by scroll plate. Then the gas will go out from the exhaust at the center of fixed scroll and get into lower chamber of compressor, so that the chamber of compressor is in high temperature and high pressure.

What's the benefits of high pressure chamber?

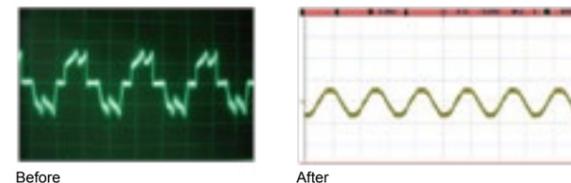
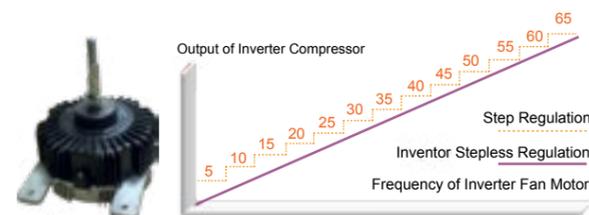
High pressure chamber compressor inhales directly to reduce overheat suction loss and improve compression efficiency.



Sensorless DC Inverter Fan Motor

Stepless speed regulation ranges from **5Hz** to **65Hz**. Compared with traditional inverter motors, the operation is more energy-saving.

Sensorless control technology guarantees lower noise, less vibration and steadier operation.



Wide Range of Voltage to Ensure a Steady Running

Working voltage range of INV2 system has been improved to **320V~460V**, which surpasses the national standard of 342V~420V. For places with insteady voltage, this system can still be running well.



Wide Applicable Location

INV2 can realize a combination of 4 outdoor unit modules connecting with as many as **80** indoor units. It's especially applicable for business building or hotels.

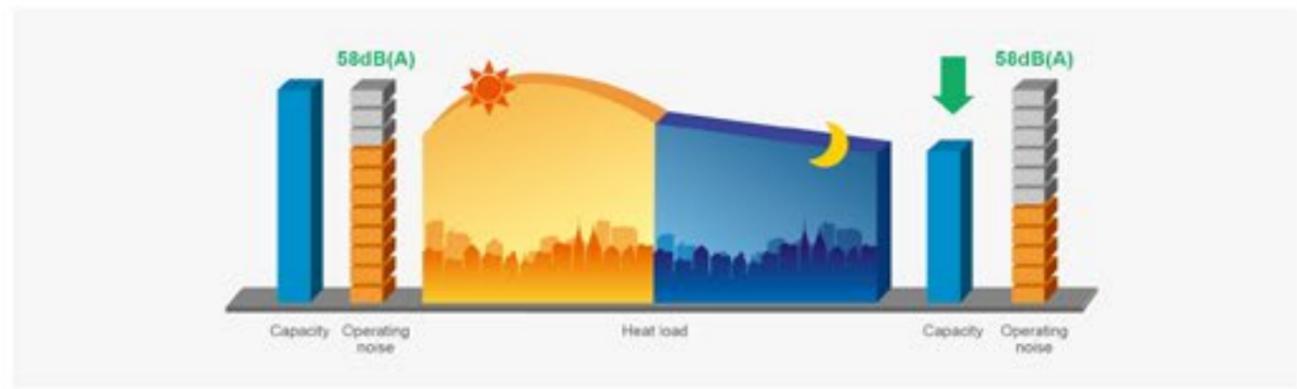


Max.IDU Connection: **80** sets

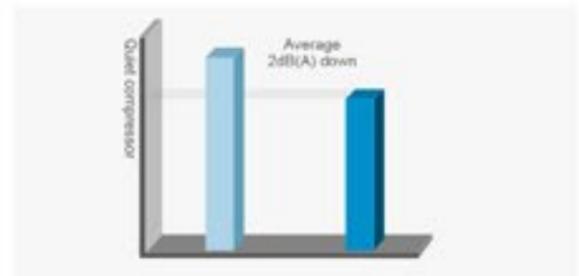
Comfortable Design for A Better Life

Intelligent Quiet Function at Night

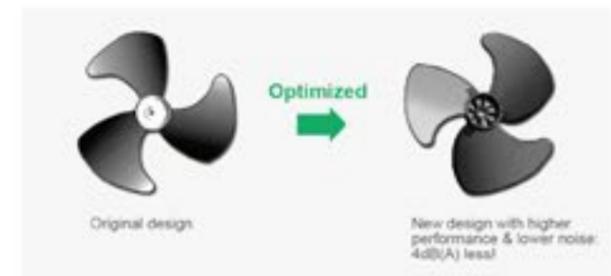
- Quiet at night**
Intelligently adjustment of outdoor fan control can minimize the noise during night time. Up to 8dB(A) can be reduced and operation noise at night is as low as 50dB(A).



- Low noise design**
HP Chamber compressor has lower exhaust pressure fluctuation so that noise is lower.



The optimized design of condensing fan blade reduces the air flow turbulence among blades, so that the noise is lower.



Individual Control for More Energy Saving

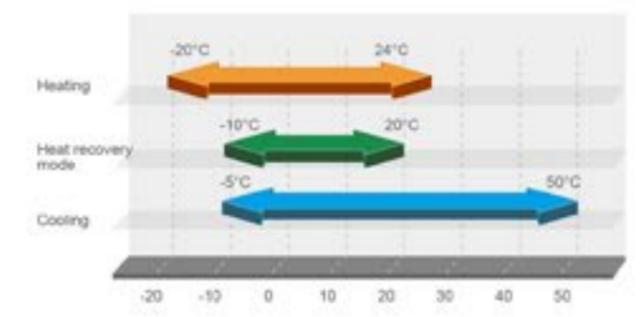
The set temperature of each room may vary by the individual thermostat control of each indoor unit. The cooling and heating operation can be performed at the same time.



Wide Operation Range

The unit can operate in wide range, greatly reducing the ambient temperature limitation.

Note:
If the required capacity of indoor units is 50% higher than outdoor unit, cooling range may be lower to -15°C.
If the required capacity of indoor units is 50% higher than outdoor unit, cooling range may be up to -5°C



Comfortable Heating

Advanced intelligent defrosting mode is adopted. Invented advanced intelligent defrosting mode will choose the best defrosting way according to outdoor temperature and operation status to realize intelligent defrosting, effectively improving heating effect and performance. While in traditional defrosting mode, timing defrosting is adopted, which not only affects comfort but also reduces energy efficiency.



Excellent Performance Ensured by Advanced Technology

Modules Rotation Operating to Maximize Lifespan

Modules 8h rotation operating

The operating priority sequence of the outdoor unit modules will be changed without restart when the system accumulatively operates for 8 hours, which can maximize the service life of the system.



Excellent Emergency Operation Function to Ensure Reliable Operation

Emergency Function

The INV2 system can realize a combination of 4 outdoor unit modules. When error is occurred to one of the modules, the others will perform the emergency operation to sustain the air conditioning.



Emergency Operation of Compressor

All the compressors in each single module are DC Inverter based, when one compressor has error, others will perform the emergency operation.



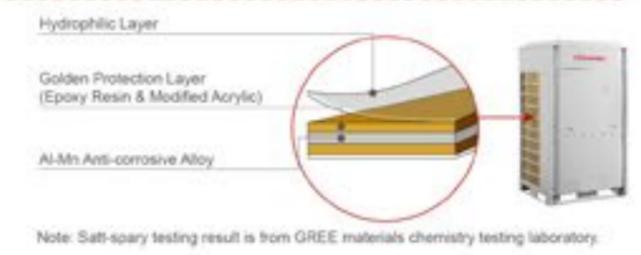
Emergency Operation of Fan

Double-fan design ensures that one fan can still work even if the other one has error.



Highly Anticorrosive Golden Fins

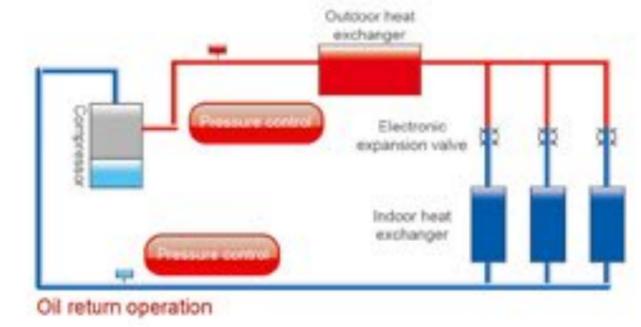
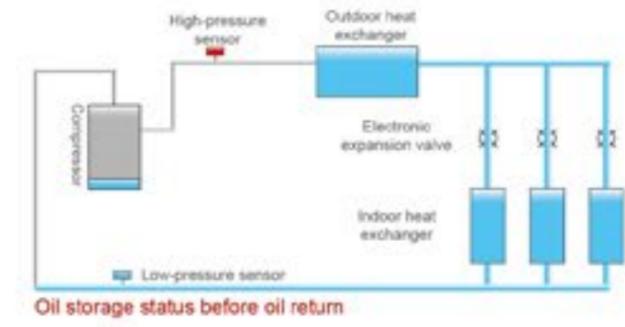
The primary material of Golden Fins is Al-Mn(Aluminum-Manganese) anti-rust alloy, which is coated with the Golden Protection Layer(Components: Epoxy Resin & Modified Acrylic, Silicon free), the anti-corrosive performance in salt-spray testing is 200%~300% higher than normal Blue Fin*.



Oil Return Control Technology

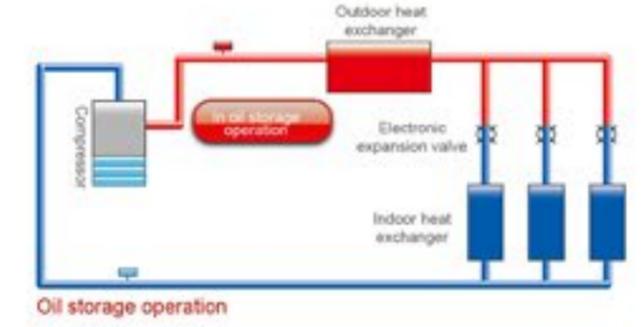
New Oil Return Control

Inventor new oil return control technology effectively controls system oil return and oil storage status of each compressor, which greatly improves the operation lifespan of compressor.



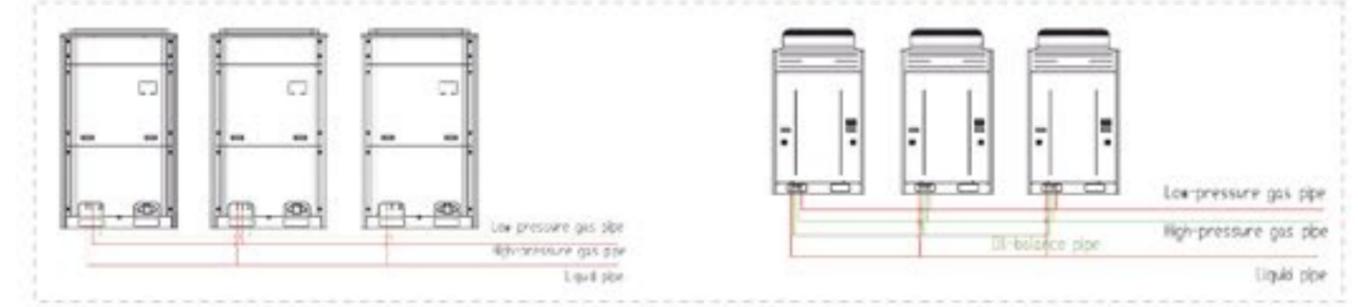
Specialized Compressor Oil Storage Control

The system applies specialized compressor oil storage technology, which can control the lowest oil level for compressor operation.



Without External Oil-balanced Pipe Design

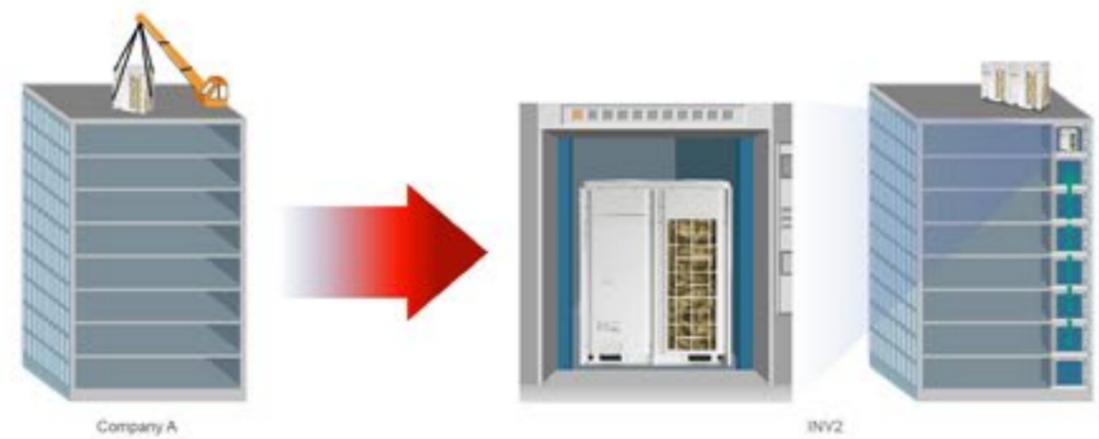
The unit is without external oil-balanced pipe design, reducing system pipeline connection and easy for engineering installation. The system will allocate lubricating oil of each module according to its demand, which is more intelligent, more efficient and more equal.



Easy Installation and Maintenance

Compact Design

With compact design, the outdoor unit can be carried to the roof of building through elevator, with no need of crane. It is easier for delivery and installation.



Easy Transportation

- **Optimized base frame**
Optimized base frame, the locating and fixing of the outdoor unit during installation is more convenient and reliable.



- **Transportable by forklift**



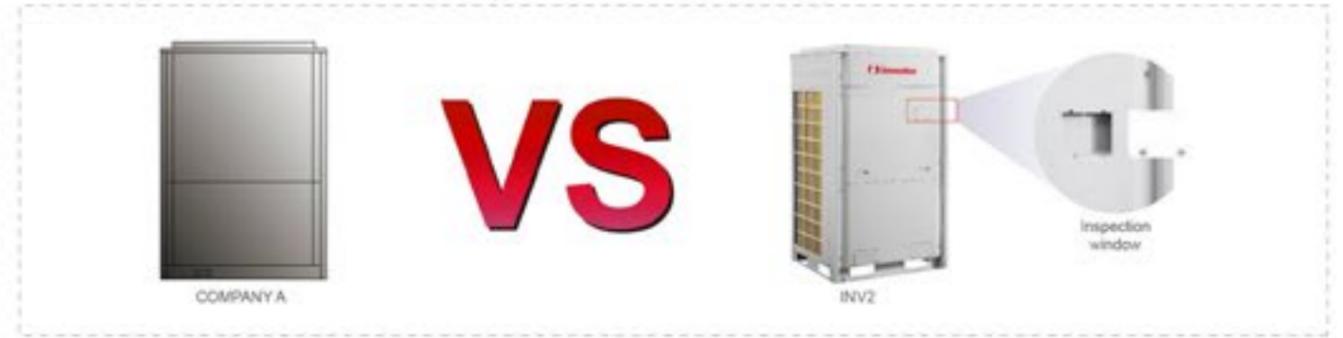
- **Five-way piping connection**
Piping and wiring are available to the front and back, left and right, and bottom.

The five-way piping connection reduces installation difficulty and cost, improves the installation efficiency.



Easy Maintenance

- Inspection window is available for quick checking of system operation status. No need to open panel for checking, which will be more time-saving and easier for maintenance.



- **Error Display & Self-diagnostic Function**
Through LED display (different combinations of ON, OFF, or BLINK) on the main board, the malfunction can be judged.



INV2 HR Line Up

HR Line up

HP	Model	Product Outlook
8HP	INV2-HR224M1T	
10HP	INV2-HR280M1T	
12HP	INV2-HR335M1T	
14HP	INV2-HR400M1T	
16HP	INV2-HR450M1T	

Model	Product Outlook
INV2-MEU11	
INV2-MEU41	
INV2-MEU81	

Specifications and Parameters

50/60 Hz

Model		INV2-HR224M1T	INV2-HR280M1T	INV2-HR335M1T	INV2-HR400M1T	INV2-HR450M1T
Capacity range	HP	8	10	12	14	16
Capacity	Cooling	22.4	28	33.5	40	45
	Heating	25	31.5	37.5	45	50
EER	WW	4.07	3.73	3.76	3.54	3.33
COP	WW	4.17	3.89	3.68	3.85	3.62
IPLV	Cooling	/	/	/	/	/
Power Supply	V/Ph/Hz	380-415V-3Ph-50/60Hz				
Max. circuit/fuse current	A	15.7/20	20.9/25	24.7/32	28.8/40	33.2/40
Power consumption	Cooling	5.5	7.5	8.9	11.3	13.5
	Heating	6	8.1	10.2	11.7	13.8
Maximum drive IDU NO	unit	13	16	19	23	26
Refrigerant Charge volume	kg	6.2	7.1	8.6	10.2	10.5
Sound pressure level	dB(A)	60	61	63	63	63
Connecting pipe	Liquid	Φ9.52			Φ12.7	
	Gas (low pressure)	Φ19.05	Φ22.2	Φ25.4		Φ28.6
	Gas (high pressure)	Φ19.05			Φ22.2	
Dimension (W*D*H)	Outline	930*765*1605			1340*765*1605	
	Package	1010*840*1775			1420*840*1775	
Net weight/Gross weight	kg	233/243	233/243	303/318	360/375	360/375
Loading quantity	40' GP	24	24	16	16	16
	40' HQ	24	24	16	16	16

50 Hz

Model		INV2-MEU11	INV2-MEU41	INV2-MEU81
Max. IDU Branches	unit	1	4	8
No. of connectable IDU of each branch	unit	8	8	8
Total Connectable IDU	unit	8	32	64
Max. Capacity of each branch	kW/kW	14	14	14
Max. Capacity of connectable IDU	kW/kW	14	45	65
Power supply	V/Ph/Hz	220-240V-1Ph-50Hz		
Power consumption	W	20	30	30
Maximum drive IDU NO	unit	1	4	8
Outdoor Unit Piping Connection	Liquid	Φ9.52		Φ15.9
	Gas (low pressure)	Φ15.9	Φ22.2	Φ22.2
	Gas (high pressure)	Φ19.05	Φ28.6	Φ28.6
Indoor Unit Piping Connection	Liquid	Φ9.5	Φ9.5	Φ9.5
	Gas	Φ15.9	Φ15.9	Φ15.9

Key Features of Indoor Units

High Static Pressure Duct Type Indoor Unit



- High static pressure design**
 Static pressure can be up to 150Pa, especially suitable for places in need of long distance airflow.
- Easy maintenance**
 The system has maintenance port for easy maintenance.

- Convenient installation**
 You can choose circular air duct or rectangular air duct according to actual needs. Or you can choose different ways of air return.
- Protection function**
 Anti-freezing protection, fan motor overload protection, temperature sensor malfunction protection.

Low Static Pressure Duct Type Indoor Unit



- **Low static pressure, low noise**

Especially suitable for rooms of compact structure or small installation space. Also, it provides you with a comfortable and quiet living environment.

- **Intelligent drainage device**

Water height difference up to 1.0m, which can effectively drain out condensing water and save space.

Note: Please specify if you need this function.

- **Convenient installation**

Tab type plastic filter, detachable fan motor, independent water pump assembly and electric box assembly, all for convenient maintenance.

- **Protection function**

Water overflow protection, anti-freezing protection, fan motor overload protection, temperature sensor malfunction protection.

Slim Duct Type Indoor Unit



- **Highly Efficient & Energy-saving**

High-efficiency DC brushless motor is used. Its efficiency is improved by over 30% compared with common motor. Evaporator flow path adopts simulating optimized design via the refrigeration system simulation software, which has greatly increased the heat exchange capacity of evaporator.

- **Slim & Small**

The unit is only 200mm's thick and 450mm's deep. Suspended ceiling doesn't have to be very high. It is suitable for ordinary rooms.

- **Wiring of Electric Control Box**

Mounting board of electric control box elements are arranged at both sides of the mounting board of fan motor. There is a wire-cross notch on each side so that wiring at both sides of the mounting board of fan motor is convenient and efficient. Strong and weak current are also separated to ensure the effectiveness of weak current signal transmission.

- **Protection Functions**

Anti-freezing protection, fan motor built-in overload protection, temperature sensor error protection

- **Ultra-quiet**

High-efficiency centrifugal fan and ultralow noise volute are developed with ANSYS and Fluent. They have also gained national patents. Meanwhile, inlet mute valve is adopted so that noise of the complete unit is greatly reduced.

- **Fast & Strong**

Intelligent temperature control technology is adopted. Cooling/ Heating function is fast and strong so that room temperature can quickly reach set temperature.

- **Flexible Installation**

Based on the requirements of building and utilization, different ways of air return and different air supply static pressure can be selected.

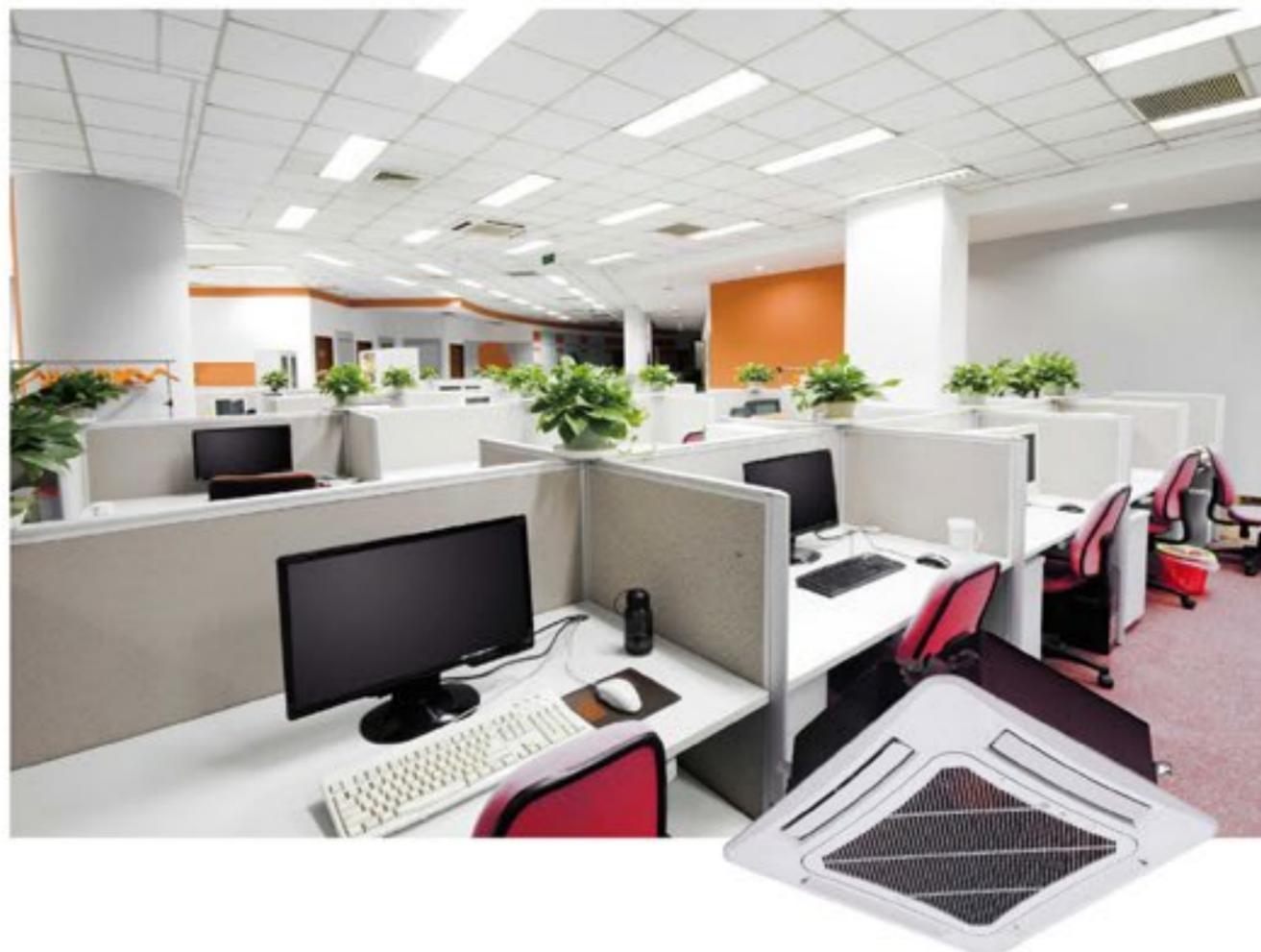
- **CAN Bus Communication Technology**

System response speed is faster and communication is more reliable. Auto addressing, non-polar communication, free wire matching

- **Convenient Operation & Maintenance**

Electric control box is attached independently so that it can be detached as a whole, which is convenient for maintenance. The installation and maintenance of fan and motor is also convenient.

4-way Cassette Indoor Unit



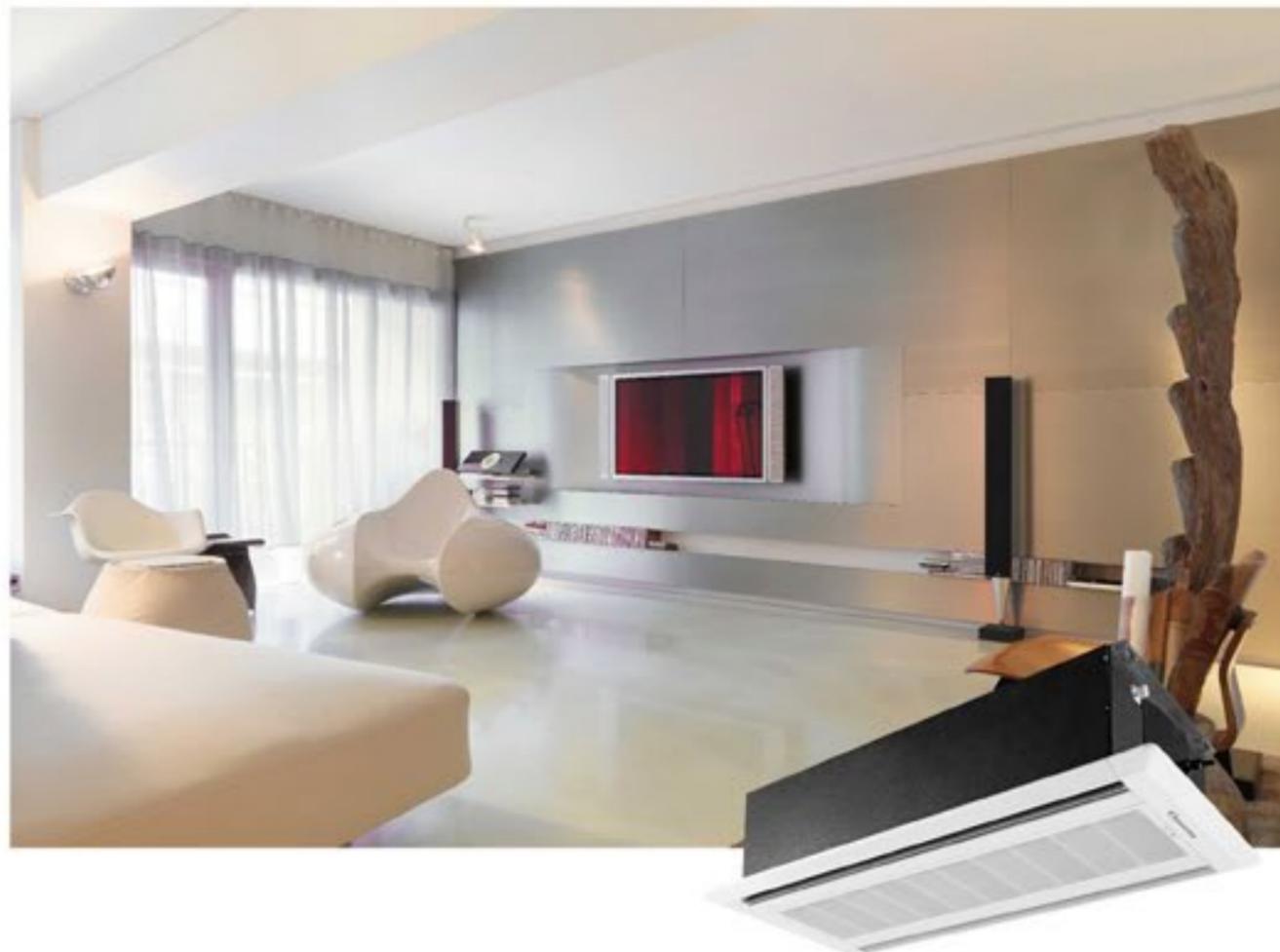
- Strong and balanced airflow**
 Unit features auto operation, 4-way airflow, 7 fan speeds and strong circulating airflow.
- Ultra-low noise operation**
 DC inverter motor can realize stepless speed regulation to lower noise. Indoor unit can be set to work under auto quiet mode via wired controller.
- Intelligent drainage device**
 Water height difference up to 1.0m, which can effectively drain out condensing water and save space.
- DC inverter motor**
 With good speed regulation performance, motor efficiency improved by 30% v.s. normal motor.
- Protection function**
 Water overflow protection, anti-freezing protection, temperature sensor malfunction protection, fan motor overload protection.

Compact 4-way Cassette Indoor Unit



- Compact Design for Easy Installation**
 Units maintain the uniform length and width with consistent ceiling opening and panel dimension, convenient for design and installation;
- Ultra-low noise operation**
 DC inverter motor can realize stepless speed regulation to lower noise. Indoor unit can be set to work under auto quiet mode via wired controller.
- Intelligent drainage device**
 Water height difference up to 1.0m, which can effectively drain out condensing water and save space.

2-way Cassette Indoor Unit



- Beautiful Appearance**
 With beautiful and elegant front panel, it is congenial to the indoor surroundings.
- Two-way air flow design**
 Two-way air outlet, to stretch air outlet distance and solve air supply problem of elongated room
- Intelligent drainage device**
 Water height difference up to 1.0m, which can effectively drain out condensing water and save space.
- Multiple protections**
 Anti-freezing protection, temperature malfunction protection, fan motor overload and humidity sensor protection.

1-way Cassette Indoor Unit



- Small installation space**
 With 185mm ultrathin design, unit can be installed in the ceiling of 19cm deep.
- High drain pump lift**
 Drain pump lift reaches 1.0m, which can effectively drain out water.
- Detachable grille and long life filter**
 Grille is detachable for easy cleaning. With durable filter, cleaning cycle is 20 times longer.
- Protection function**
 Water overflow protection, anti-freezing protection, fan motor overload protection, temperature sensor malfunction protection.

Wall-mounted Indoor Unit



- Comfortable and balanced airflow, up&down air outlet**

Up air outlet: In cooling, cool air blows out horizontally and then gradually drops.
Down air swing: In heating, warm air blows downward and then gradually climbs up.

- Triple defenders for better purification**

Mildew-proof filter, electrostatic fibre and anti-biotic fibre adopted to remove dust, smell, bacteria and mildew.

- Cold air prevention design**

During heating in winter, cold air prevention function is enabled so that air won't be blown out until it's warm.

- Multiple protections**

Anti-freezing protection, temperature sensor malfunction protection, fan motor overload protection.

Floor Ceiling Type Indoor Unit



- Hoisted or seated, flexible installation**

Unit can be hoisted or seated. When seated, suspended ceiling is not needed.

- Beautiful appearance**

With beautiful and elegant front panel, it is congenial to the indoor surroundings.

- Protection function**

Anti-freezing protection, temperature sensor malfunction protection, fan motor overload protection.

- Horizontal and vertical air swing**

Wider air swing range for your comfortable working and living environment.

Console Indoor Unit



- Multiple fan speed**
 The fan can operate in multiple speed and satisfy different air flow volume requirements.
- High drain pump lift**
 Drain pump lift reaches 1.0m, which can effectively drain out water.
- Detachable grille and long life filter**
 Grille is detachable for easy cleaning. With long life filter, cleaning cycle is 20 times longer.
- Protection function**
 Water overflow protection, anti-freezing protection, fan motor overload protection, temperature sensor malfunction protection, auxiliary electric heating overheat protection(This function is not included in pure heat pump unit).

Floor Standing Indoor Unit



- Wide Application**
 It can be widely adopted in hotels, restaurants, office, etc.
- Auto clean to ensure a healthy life**
 After turning off the unit, the indoor fan will keep running in low speed for a moment to dry the inner components and parts, in order to prevent mildew and keep user healthy.

Fresh Air Processing Indoor Unit

Airflow volume: 1200~4000m³/h
 Applicable range: Residential houses, villas, business buildings, hotels, apartments, etc.



One system, two functions

- Adopted with DC inverter technology, Fresh Air DC Inverter Multi VRF System features air conditioning function and fresh air function.



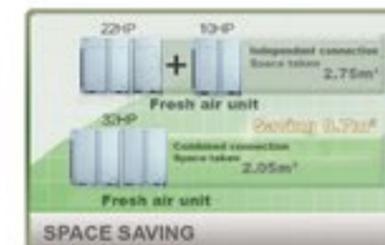
Enjoy fresh air

- Airflow volume: 1200~4000m³/h, cooling capacity: 14-45kW
 Applicable for all kinds of structure.
- Direct evaporative cooling adopted, air conditioning+fresh air can be realized accurately and precisely.
- DC inverter technology adopted, constant humidity is enabled with less power consumption.
- Integrated system control with Inverter INV2 Multi VRF System.



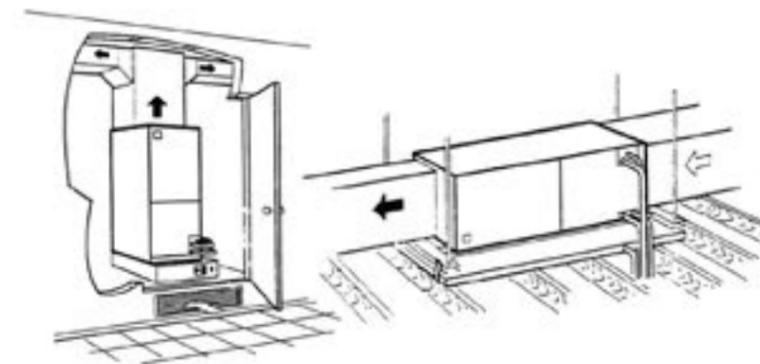
Air conditioning and fresh air, two in one

- Less investment**
 Fresh Air DC Inverter Multi VRF System can be combined with Inverter INV2. For a same room, if the same amount of fresh air is to be taken, then the cost of INV2 + Fresh air unit is equivalent to the cost of INV2+Air exchange fan.
- Less operation cost**
 Unit can control refrigerant output according to actual needs to ensure constant airflow temperature. By adjusting power output, light-load but high power operation can be avoided. Thus, operation cost can be greatly reduced.
- Less installation space**
 Save installation space for outdoor units. Especially suitable for places that have restricted installation space.



Air Handler

- Highly Flexible Installation**
 The unit is designed for outdoor installation and less indoor space taking, allowing easy installation and maintenance. The unit can be installed on the ground or on the roof of the building, which means the installation is totally flexible depending on the project requirement.
- Cold Air Prevention Design**
 When heating in winter, cold air prevention function is enabled so that air won't be blown out until it's warm.
- Long life and Washable Filter**
 The filter is easy to be dismantled and installed. You can use dust collector or water to clear away the dust.



Indoor Units Lineup

Specifications of Indoor Units

Type of indoor unit	Specification	22	25	28	32	36	40	45	50	56	63	71	72	80	90	100	112	125	140	160	224	280	450	
High Static Pressure Duct Type Unit										●	●	●		●	●	●	●	●	●	●	●	●	●	●
Low Static Pressure Duct Type Unit		●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●				
Slim Duct Type Indoor Unit		●	●	●	●	●	●	●	●	●	●		●											
4-way Cassette Unit				●		●		●	●	●	●	●		●	●	●	●	●	●	●				
Compact 4-way Cassette Indoor Unit		●		●		●		●	●	●														
2-way Cassette Indoor Unit				●		●		●	●	●	●	●												
1-way Cassette Unit		●		●		●		●	●															
Wall mounted Type Unit		●	●	●		●		●	●	●	●	●												
Floor Ceiling Type Indoor Unit				●		●		●	●	●	●			●										
Console Indoor Unit		●	●	●		●		●	●															
Floor Standing Type Indoor Unit														●						●				
Fresh Air Processing Indoor Unit																				●	●	●	●	●
Air handler													●	●	●	●				●				

High Static Pressure Duct Type Indoor Unit 50/60 Hz

Model	INV2-56HDP1S	INV2-63HDP1S	INV2-71HDP1S	INV2-80HDP1S	INV2-98HDP1S	
Capacity	Cooling kW	5.6	6.3	7.1	8.0	9.0
	Heating kW	6.3	7.1	8.0	9.0	10.0
Power supply	VPh/Hz	220-240/150 & 208-230/160				
Power consumption	W	120	120	130	130	200
Airflow volume(H/M/L)	m ³ /h	1000/800/600	1000/800/600	1100/900/700	1100/900/700	1700/1450/1100
	CFM	590/471/355	590/471/355	650/530/410	650/530/410	1000/853/650
Rated Current ²	Cooling A	0.6	0.6	0.6	0.6	1.0
	Heating A	0.6	0.6	0.6	0.6	1.0
	Water Heating A	/	/	/	/	/
ESP	Pa	70.0-100				
Sound pressure level(H/M/L)	dB(A)	44/40/36	44/40/36	45/41/37	45/41/37	46/44/42
Connecting pipe diameter	Liquid mm	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52
	Gas mm	φ15.9	φ15.9	φ15.9	φ15.9	φ15.9
Drain pipe	External dia. mm	φ25	φ25	φ25	φ25	φ25
	Thickness mm	2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline mm	1271x556x268				
	Package mm	1346x597x283				
Net weight/Gross weight	kg	35/40	35/40	35/40	35/40	47/54
Loading	40' GP set	192	192	192	192	128
	40' HQ set	216	216	216	216	128

Model	INV2-108HDP1S	INV2-112HDP1S	INV2-125HDP1S	INV2-140HDP1S	INV2-160HDP1S	INV2-224HDP1S	INV2-280HDP1S	
Capacity	Cooling kW	10.0	11.2	12.5	14.0	16.0	22.4	
	Heating kW	11.2	12.5	14.0	16.0	18.0	25.0	
Power supply	VPh/Hz	220-240/150 & 208-230/160					220-240/150/160	220-240/150 & 208-230/160
Power consumption	W	200	200	220	220	560	800	
Airflow volume(H/M/L)	m ³ /h	1700/1450/1100	1700/1450/1100	2000/1550/1200	2000/1700/1400	3100	4000	
	CFM	1000/853/650	1000/853/650	1175/912/706	1175/1000/804	1824	2355	
Rated Current ²	Cooling A	1.0	1.0	1.0	1.0	4	4.1	
	Heating A	1.0	1.0	1.0	1.0	4	4.1	
	Water Heating A	/	/	/	/	/	/	
ESP	Pa	70.0-100					90	150/90-200
Sound pressure level(H/M/L)	dB(A)	46/44/42	46/44/42	46/45/42	46/46/44	55.0	54.0	
Connecting pipe diameter	Liquid mm	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	
	Gas mm	φ15.9	φ15.9	φ15.9	φ15.9	φ19	φ22.2	
Drain pipe	External dia. mm	φ25	φ25	φ25	φ25	φ30	φ30	
	Thickness mm	2.5	2.5	2.5	2.5	1.5	1.5	
Dimension (WxDxH)	Outline mm	1229x775x290					1497x796x389	1683x791x385
	Package mm	1338x877x305					1578x883x400	1758x883x470
Net weight/Gross weight	kg	47/54	47/54	47/54	47/54	79/103	82/104	
Loading	40' GP set	128	128	128	128	75	65	
	40' HQ set	128	128	128	128	75	65	

Low Static Pressure Duct Type Indoor Unit 50/60 Hz

Model	INV2-22LD P1S	INV2-25LD P1S	INV2-28LD P1S	INV2-32LD P1S	INV2-36LD P1S	
Capacity	Cooling kW	2.2	2.5	2.8	3.2	3.6
	Heating kW	2.5	2.8	3.6	3.6	4.0
Power supply	VPh/Hz	220-240/150 & 208-230/160				
Power consumption	W	35	35	35	43	43
Airflow volume(H/M/L)	m ³ /h	450/350/250	450/350/250	450/350/250	550/450/350	550/450/350
	CFM	265/206/147	265/206/147	265/206/147	325/265/206	325/265/206
Rated Current ²	Cooling A	0.2	0.2	0.2	0.2	0.2
	Heating A	0.2	0.2	0.2	0.2	0.2
	Water Heating A	/	/	/	/	/
ESP	Pa	15.0-30				
Sound pressure level(H/M/L)	dB(A)	31/28/25	31/28/25	31/28/25	32/30/27	32/30/27
Connecting pipe diameter	Liquid mm	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35
	Gas mm	φ9.52	φ9.52	φ9.52	φ12.7	φ12.7
Drain pipe	External dia. mm	25	25	25	25	25
	Thickness mm	2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline mm	700 x 615 x 200				
	Package mm	893x743x305				
Net weight/Gross weight	kg	22/27	22/27	22/27	22/28	22/28
Loading	40' GP set	192	192	192	192	192
	40' HQ set	192	192	192	192	192

Model		INV2-40LD P15	INV2-45LD P15	INV2-50LD P15	INV2-56LD P15	INV2-63LD P15
Capacity	Cooling	kW 4.0	4.5	5.0	5.6	6.3
	Heating	kW 4.5	5.0	5.6	6.3	7.1
Power supply	V/Ph/Hz	220-240/1/50 & 208-230/1/60				
Power consumption	W	52	52	52	99	99
Airflow volume(HML)	m³/h	700/600/450	700/600/450	700/600/450	1000/800/600	1000/800/600
	CFM	410/355/265	410/355/265	410/355/265	590/471/355	590/471/355
Rated Current ¹	Cooling	A 0.3	0.3	0.3	0.5	0.5
	Heating	A 0.3	0.3	0.3	0.5	0.5
	Water Heating	A /	/	/	/	/
ESP	Pa	15.0-30				
Sound pressure level(HML)	dB(A)	33/31/28	33/31/28	33/31/28	35/33/30	35/33/30
Connecting pipe diameter	Liquid	mm φ6.35	φ6.35	φ6.35	φ9.52	φ9.52
	Gas	mm φ12.7	φ12.7	φ12.7	φ15.9	φ15.9
Drain pipe	External dia.	mm 25	25	25	25	25
	Thickness	mm 2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline	mm 900 x 615 x 200				1100 x 815 x 200
	Package	mm 1123x743x305				1323x743x305
Net weight/Gross weight	kg	27/33	27/33	27/33	31/38	31/38
Loading	40' GP	set 192	192	192	162	162
	40' HQ	set 192	192	192	162	162

Model		INV2-40SD15*	INV2-45SD15*	INV2-50SD15*	INV2-56SD15*	INV2-63SD15*	INV2-72SD15*
Capacity	Cooling	kW 4.0	4.5	5.0	5.6	6.3	7.2
	Heating	kW 4.5	5.0	5.6	6.3	7.0	8.0
Power supply	V/Ph/Hz	220-240/1/50 & 208-230/1/60					
Power consumption	W	35	35	35	45	45	50
Airflow volume(HML)	m³/h	750/660/540	750/660/540	750/660/540	850/700/610	850/700/610	1100/800/640
	CFM	441/388/318	441/388/318	441/388/318	500/412/356	500/412/356	647/471/377
Rated Current ¹	Cooling	A 0.3	0.3	0.3	0.3	0.3	0.5
	Heating	A 0.3	0.3	0.3	0.3	0.3	0.5
	Water Heating	A /	/	/	/	/	/
ESP	Pa	0/15					
Sound pressure level(HML)	dB(A)	33/30/27	33/30/27	33/30/27	35/33/29	35/33/29	37/34/30
Connecting pipe diameter	Liquid	mm φ6.35	φ6.35	φ6.35	φ9.52	φ9.52	φ9.52
	Gas	mm φ12.7	φ12.7	φ12.7	φ15.9	φ15.9	φ15.9
Drain pipe	External dia.	mm 25	25	25	25	25	25
	Thickness	mm 2.5	2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline	mm 1010x450x200				1010x450x200	1310x450x200
	Package	mm 1303x551x285				1303x551x285	1603x551x285
Net weight/Gross weight	kg	23.5/28	23.5/28	23.5/28	24.5/29	24.5/29	30.5/36
Loading	40' GP	set 288	288	288	288	288	224
	40' HQ	set 288	288	288	288	288	224

Note:
* This series is without water pump.

Model		INV2-71LD P15	INV2-80LD P15	INV2-90LD P15	INV2-100LD P15	INV2-112LD P15	INV2-125LD P15	INV2-140LD P15
Capacity	Cooling	kW 7.1	8.0	9.0	10.0	11.2	12.5	14.0
	Heating	kW 8.0	9.0	10.0	11.2	12.5	14.0	16.0
Power supply	V/Ph/Hz	220-240/1/50 & 208-230/1/60						
Power consumption	W	105	140	209	209	209	230	230
Airflow volume(HML)	m³/h	1000/800/600	1100/1000/800	1500/1250/950	1500/1350/1000	1700/1500/1100	2000/1500/1150	2000/1500/1150
	CFM	590/471/355	650/590/471	885/736/599	865/795/590	1000/885/650	1175/885/677	1175/885/677
Rated Current ¹	Cooling	A 0.5	0.7	1.0	1.0	1.0	1.1	1.1
	Heating	A 0.5	0.7	1.0	1.0	1.0	1.1	1.1
	Water Heating	A /	/	/	/	/	/	/
ESP	Pa	30.0-50						
Sound pressure level(HML)	dB(A)	35/33/30	36/34/31	40/38/32	40/38/32	40/38/32	42/40/37	42/40/37
Connecting pipe diameter	Liquid	mm φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm φ15.9	φ15.9	φ15.9	φ15.9	φ15.9	φ15.9	φ15.9
Drain pipe	External dia.	mm 25	25	25	25	25	25	25
	Thickness	mm 2.5	2.5	2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline	mm 1200 x 655 x 260						1340 x 655 x 260
	Package	mm 1448x858x315						1591x861x330
Net weight/Gross weight	kg	40/47	40/47	46/55	46/55	46/55	47/56	47/56
Loading	40' GP	set 96	96	78	78	78	78	78
	40' HQ	set 96	96	78	78	78	78	78

4-way Cassette Indoor Unit 50/60 Hz

Model		INV2-28FC15	INV2-36FC15	INV2-45FC15	INV2-56FC15	INV2-56FC15	INV2-63FC15	INV2-71FC15
Capacity	Cooling	kW 2.8	3.6	4.5	5.0	5.6	6.3	7.1
	Heating	kW 3.2	4.0	5.0	5.6	6.3	7.1	8.0
Power supply	V/Ph/Hz	220-240/1/50 & 208-230/1/60						
Power consumption	W	48	48	48	50	59	59	68
Airflow volume(HML)	m³/h	750/650/550	750/650/550	750/650/550	830/650/550	1000/900/750	1000/900/750	1180/950/850
	CFM	440/383/325	440/383/325	440/383/325	490/383/325	590/530/440	590/530/440	695/609/560
Rated Current ¹	Cooling	A 0.2	0.2	0.2	0.2	0.3	0.3	0.3
	Heating	A 0.2	0.2	0.2	0.2	0.3	0.3	0.3
	Water Heating	A /	/	/	/	/	/	/
Sound pressure level(HML)	dB(A)	36/34/31	36/34/31	36/34/31	36/34/31	37/35/32	37/35/32	38/36/33
Connecting pipe diameter	Liquid	mm φ6.35	φ6.35	φ6.35	φ6.35	φ9.52	φ9.52	φ9.52
	Gas	mm φ9.52	φ12.7	φ12.7	φ12.7	φ15.9	φ15.9	φ15.9
Drain pipe	External dia.	mm 25	25	25	25	25	25	25
	Thickness	mm 2.5	2.5	2.5	2.5	2.5	2.5	2.5
Main Body Dimension (WxDxH)	Outline	mm 840x840x190	840x840x190	840x840x190	840x840x190	840x840x240	840x840x240	840x840x240
	Package	mm 963x963x272	963x963x272	963x963x272	963x963x272	963x963x325	963x963x325	963x963x325
Net weight/Gross weight	kg	22.5/29.5	22.5/29.5	22.5/29.5	22.5/29.5	26.5/34.5	26.5/34.5	26.5/34.5
Panel Dimension (WxDxH)	Outline	mm 950x950x85	950x950x85	950x950x85	950x950x85	950x950x85	950x950x85	950x950x85
	Package	mm 1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133
Net weight/Gross weight	kg	7/11	7/11	7/11	7/11	7/11	7/11	7/11
Loading quantity	40' GP	set 167	167	167	167	140	140	140
	40' HQ	set 171	171	171	171	156	156	156

Slim Duct Type Indoor Unit 50/60 Hz

Model		INV2-225D15*	INV2-255D15*	INV2-285D15*	INV2-325D15*	INV2-365D15*
Capacity	Cooling	kW 2.2	2.5	2.8	3.2	3.6
	Heating	kW 2.5	2.8	3.2	3.6	4.0
Power supply	V/Ph/Hz	220-240/1/50 & 208-230/1/60				
Power consumption	W	25	25	25	30	30
Airflow volume(HML)	m³/h	450/400/320	450/400/320	450/400/320	550/450/340	550/450/340
	CFM	265/235/188	265/235/188	265/235/188	324/265/200	324/265/200
Rated Current ¹	Cooling	A 0.2	0.2	0.2	0.3	0.3
	Heating	A 0.2	0.2	0.2	0.3	0.3
	Water Heating	A /	/	/	/	/
ESP	Pa	0/15				
Sound pressure level(HML)	dB(A)	30/28/22	30/28/22	30/28/22	31/29/25	31/29/25
Connecting pipe diameter	Liquid	mm φ6.35	φ6.35	φ6.35	φ6.35	φ6.35
	Gas	mm φ9.52	φ9.52	φ9.52	φ9.52	φ12.7
Drain pipe	External dia.	mm 25	25	25	25	25
	Thickness	mm 2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline	mm 710x450x200				1000x551x285
	Package	mm 1000x551x285				1000x551x285
Net weight/Gross weight	kg	18.5/22	18.5/22	18.5/22	19.5/23	19.5/23
Loading	40' GP	set 352	352	352	352	352
	40' HQ	set 352	352	352	352	352

Model		INV2-80FC15	INV2-90FC15	INV2-106FC15	INV2-112FC15	INV2-125FC15	INV2-140FC15	INV2-160FC15
Capacity	Cooling	kW 8.0	9.0	10.0	11.2	12.5	14.0	16.0
	Heating	kW 9.0	10.0	11.2	12.5	14.0	16.0	17.5
Power supply	V/Ph/Hz	220-240/1/50 & 208-230/1/60						
Power consumption	W	68	96	96	110	110	110	130
Airflow volume(HML)	m³/h	1180/950/850	1500/1350/1100	1500/1350/1100	1700/1400/1100	1860/1500/1150	1860/1500/1150	2100/1700/1400
	CFM	695/556/550	880/795/650	880/795/650	1000/824/650	1095/880/677	1095/880/677	1235/1000/824
Rated Current ¹	Cooling	A 0.3	0.4	0.4	0.5	0.5	0.5	0.6
	Heating	A 0.3	0.4	0.4	0.5	0.5	0.5	0.6
	Water Heating	A /	/	/	/	/	/	/
Sound pressure level(HML)	dB(A)	38/36/33	40/37/35	40/37/35	41/38/36	43/41/38	43/41/38	47/44/42
Connecting pipe diameter	Liquid	mm φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm φ15.9	φ15.9	φ15.9	φ15.9	φ15.9	φ15.9	φ19.05
Drain pipe	External dia.	mm 25	25	25	25	25	25	25
	Thickness	mm 2.5	2.5	2.5	2.5	2.5	2.5	2.5
Main Body Dimension (WxDxH)	Outline	mm 840x840x240	840x840x320	840x840x320	840x840x320	840x840x320	840x840x320	910x910x293
	Package	mm 963x963x325	963x963x409	963x963x409	963x963x409	963x963x409	963x963x409	1023x963x375
Net weight/Gross weight	kg	26.5/34.5	32.5/40.0	32.5/40.0	32.5/40.0	32.5/40.0	32.5/40.0	46.5/56.5
Panel Dimension (WxDxH)	Outline	mm 950x950x85	950x950x85	950x950x85	950x950x85	950x950x85	950x950x85	1040x1040x85
	Package	mm 1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1137x1137x140
Net weight/Gross weight	kg	7/11	7/11	7/11	7/11	7/11	7/11	7.5/11.5
Loading quantity	40' GP	set 140	104	104	104	104	104	144
	40' HQ	set 156	119	119	119	119	119	144

Compact 4-way Cassette Indoor Unit 50/60 Hz

Model		INV2-22FCC1S	INV2-28FCC1S	INV2-36FCC1S	INV2-45FCC1S	INV2-56FCC1S	INV2-66FCC1S
Capacity	Cooling	kW 2.2	2.8	3.6	4.5	5	5.6
	Heating	kW 2.5	3.2	4	5	5.6	6.3
Power supply	V/Ph/Hz	220-240/1/50 & 208-230/1/60					
Power consumption	W	35	35	35	45	45	45
Airflow volume(HML)	m ³ /h	600/500/400	600/500/400	600/500/400	700/600/480	700/600/480	700/600/480
	CFM	355/295/235	355/295/235	355/295/235	410/355/283	410/355/283	410/355/283
Rated Current ¹	Cooling	A 0.4	0.4	0.4	0.5	0.5	0.5
	Heating	A 0.4	0.4	0.4	0.5	0.5	0.5
	Water Heating	A /	/	/	/	/	/
Sound pressure level(HML)	dB(A)	46/39/35	46/39/35	46/39/35	47/43/38	47/43/38	47/43/38
Connecting pipe diameter	Liquid	mm φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35
	Gas	mm φ9.52	φ9.52	φ12.7	φ12.7	φ12.7	φ15.9
Drain pipe	External dia.	mm 25	25	25	25	25	25
	Thickness	mm 2.5	2.5	2.5	2.5	2.5	2.5
Main Body	Dimension (WxDxH)	mm 596x596x240	596x596x240	596x596x240	596x596x240	596x596x240	596x596x240
	Package	mm 773x733x300	773x733x300	733x733x300	733x733x300	733x733x300	733x733x300
	Net weight/Gross weight	kg 20.5/25.5	20.5/25.5	20.5/25.5	20.5/25.5	20.5/25.5	20.5/25.5
Panel	Dimension (WxDxH)	mm 650x650x50	650x650x50	650x650x50	650x650x50	650x650x50	650x650x50
	Package	mm 783x783x105	783x783x105	783x783x105	783x783x105	783x783x105	783x783x105
	Net weight/Gross weight	kg 3.5/5.0	3.5/5.0	3.5/5.0	3.5/5.0	3.5/5.0	3.5/5.0
Loading quantity	40GP	set 267	267	267	267	267	267
	40HQ	set 288	288	288	288	288	288

2-way Cassette Indoor Unit 50/60 Hz

Model		INV2-28DC 1S	INV2-36DC 1S	INV2-45DC 1S	INV2-56DC 1S	INV2-66DC 1S	INV2-83DC 1S	INV2-110DC 1S
Capacity	Cooling	kW 2.8	3.6	4.5	5.0	5.6	6.3	7.1
	Heating	kW 3.2	4.0	5.0	5.8	6.3	7.1	8.0
Power supply	V/Ph/Hz	220-240/1/50 & 208-230/1/60						
Power consumption	W	55.0	55.0	55.0	55.0	103.0	103.0	103.0
Airflow volume(HML)	m ³ /h	830/600/530	830/600/530	830/600/530	830/600/530	1100/820/760	1100/820/760	1100/820/760
	CFM	490/355/312	490/355/312	490/355/312	490/355/312	600/483/647	600/483/647	600/483/647
Rated Current ¹	Cooling	A 0.3	0.3	0.3	0.3	0.7	0.7	0.7
	Heating	A 0.3	0.3	0.3	0.3	0.7	0.7	0.7
	Water Heating	A /	/	/	/	/	/	/
Sound pressure level(HML)	dB(A)	35/33/31	35/33/31	35/33/31	35/33/31	39/37/35	39/37/35	39/37/35
Connecting pipe diameter	Liquid	mm φ6.35	φ6.35	φ6.35	φ6.35	φ9.52	φ9.52	φ9.52
	Gas	mm φ9.52	φ12.7	φ12.7	φ12.7	φ15.9	φ15.9	φ15.9
Drain pipe	External dia.	mm 25	25	25	25	25	25	25
	Thickness	mm 2.5	2.5	2.5	2.5	2.5	2.5	2.5
Main Body	Dimension (WxDxH)	mm 1200x520x315	1200x520x315	1200x520x315	1200x520x315	1200x520x315	1200x520x315	1200x520x315
	Package	mm 1520x655x415	1520x655x415	1520x655x415	1520x655x415	1520x655x415	1520x655x415	1520x655x415
	Net weight/Gross weight	kg 40.5/52.5	40.5/52.5	40.5/52.5	40.5/52.5	43.0/55.0	43.0/55.0	43.0/55.0
Panel	Dimension (WxDxH)	mm 1443x630x33	1443x630x33	1443x630x33	1443x630x33	1443x630x33	1443x630x33	1443x630x33
	Package	mm 1575x765x105	1575x765x105	1575x765x105	1575x765x105	1575x765x105	1575x765x105	1575x765x105
	Net weight/Gross weight	kg 7.0/11.0	7.0/11.0	7.0/11.0	7.0/11.0	7.0/11.0	7.0/11.0	7.0/11.0
Loading quantity	40GP	set 101	101	101	101	101	101	101
	40HQ	set 115	115	115	115	115	115	115

1-way Cassette Indoor Unit 50/60 Hz

Model		INV2-22SC1S	INV2-28SC1S	INV2-36SC1S	INV2-45SC1S	INV2-56SC1S
Capacity	Cooling	kW 2.2	2.8	3.6	4.5	5.0
	Heating	kW 2.5	3.2	4.0	5.0	5.6
Power supply	V/Ph/Hz	220-240/1/50 & 208-230/1/60				
Power consumption	W	30	30	30	45	45
Airflow volume(HML)	m ³ /h	600/500/450	600/500/450	600/500/450	830/600/500	830/600/500
	CFM	355/295/265	355/295/265	355/295/265	490/355/295	490/355/295
Rated Current ¹	Cooling	A 0.2	0.2	0.2	0.3	0.3
	Heating	A 0.2	0.2	0.2	0.3	0.3
	Water Heating	A /	/	/	/	/
Sound pressure level(HML)	dB(A)	36/32/28	36/32/28	36/32/28	40/35/30	40/35/30
Connecting pipe diameter	Liquid	mm φ6.35	φ6.35	φ6.35	φ6.35	φ6.35
	Gas	mm φ9.52	φ12.7	φ12.7	φ12.7	φ12.7
Drain pipe	External dia.	mm 25	25	25	25	25
	Thickness	mm 2.5	2.5	2.5	2.5	2.5
Main Body	Dimension (WxDxH)	mm 687x385x178	687x385x178	687x385x178	687x385x178	687x385x178
	Package	mm 1307x501x310	1307x501x310	1307x501x310	1307x501x310	1307x501x310
	Net weight/Gross weight	kg 20.0/27.0	20.0/27.0	20.0/27.0	21.0/28.5	21.0/28.5
Panel	Dimension (WxDxH)	mm 1200x460x55	1200x460x55	1200x460x55	1200x460x55	1200x460x55
	Package	mm 1265x536x118	1265x536x118	1265x536x118	1265x536x118	1265x536x118
	Net weight/Gross weight	kg 4.2/6.0	4.2/6.0	4.2/6.0	4.2/6.0	4.2/6.0
Loading quantity	40GP	set 138	138	138	138	138
	40HQ	set 138	138	138	138	138

Wall-mounted Type Indoor Unit 50 Hz

Model		INV2-22W1S*	INV2-28W1S*	INV2-36W1S*	INV2-45W1S*	INV2-56W1S*	INV2-63W1S*	INV2-71W1S*
Capacity	Cooling	kW 2.2	2.8	3.6	4.5	5.0	5.6	6.3
	Heating	kW 2.5	3.2	4.0	5.0	5.8	6.3	7.0
Power supply	V/Ph/Hz	220-240/1/50						
Power consumption	W	50	50	60	60	60	70	70
Airflow volume(HML)	m ³ /h	500/420/350	500/420/350	630/550/480	630/550/480	630/550/480	750/600/500	750/600/500
	CFM	294/247/206	294/247/206	371/324/282	371/324/282	371/324/282	441/353/294	441/353/294
Rated Current ¹	Cooling	A 0.2	0.2	0.31	0.31	0.31	0.31	0.31
	Heating	A 0.2	0.2	0.31	0.31	0.31	0.31	0.31
	Water Heating	A /	/	/	/	/	/	/
Sound pressure level(HML)	dB(A)	38/34/30	38/34/30	44/41/38	44/41/38	44/41/38	44/41/38	44/41/38
Connecting pipe diameter	Liquid	mm φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ9.52	φ9.52
	Gas	mm φ9.52	φ9.52	φ12.7	φ12.7	φ12.7	φ15.9	φ15.9
Drain pipe	External dia.	mm φ20	φ20	φ20	φ20	φ20	φ30	φ30
	Thickness	mm 1.5	1.5	1.5	1.5	1.5	1.5	1.5
Dimension (WxDxH)	Outline	mm 843x180x275				940x200x296	1008x221x319	
	Package	mm 973x256x370				1008x288x396	1131x396x328	
Net weight/Gross weight	kg	10/12.5	10/12.5	12.5/15.5	12.5/15.5	12.5/15.5	15/18.5	15/18.5
Loading	40 GP	set 702	702	557	557	557	441	441
	40 HQ	set 819	819	624	624	624	503	503

Note:
* This series is without water pump.

Floor Ceiling Type Indoor Unit 50/60 Hz

Model		INV2-28K1S	INV2-36K1S	INV2-50K1S	INV2-63K1S	INV2-71K1S	INV2-90K1S	INV2-112K1S	INV2-125K1S	INV2-140K1S
Capacity	Cooling	kW 2.8	3.6	5.0	6.3	7.1	9.0	11.2	12.5	14.0
	Heating	kW 3.2	4.0	5.6	7.1	8.0	10.0	12.5	14.0	16.0
Power supply	V/Ph/Hz	220-240/1/50 & 208-230/1/60								
Power consumption	W	40	40	50	75	75	140	160	160	160
Airflow volume(HML)	m ³ /h	650/580/500	650/580/500	950/850/700	1400/1150/1000	1400/1150/1000	1600/1400/1200	2000/1800/1450	2000/1800/1450	2000/1800/1450
	CFM	380/341/294	380/341/294	560/500/410	825/677/590	825/677/590	940/824/706	1175/1056/853	1175/1056/853	1175/1056/853
Rated Current ¹	Cooling	A 0.2	0.2	0.25	0.38	0.38	0.7	0.95	0.95	0.95
	Heating	A 0.2	0.2	0.25	0.38	0.38	0.7	0.95	0.95	0.95
	Water Heating	A /	/	/	/	/	/	/	/	/
Sound pressure level(HML)	dB(A)	36/34/32	36/34/32	42/38/33	44/42/39	44/42/39	50/47/43	51/47/42	52/49/45	52/49/45
Connecting pipe diameter	Liquid	mm φ6.35	φ6.35	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm φ9.52	φ12.7	φ12.7	φ15.9	φ15.9	φ15.9	φ15.9	φ15.9	φ15.9
Drain pipe	External dia.	mm φ17	φ17	φ17	φ17	φ17	φ17	φ17	φ17	φ17
	Thickness	mm 1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
Dimension (WxDxH)	Outline	mm 1220x700x225				1420x700x245	1700x700x245			
	Package	mm 1343x823x315				1546x828x345	1828x828x345			
Net weight/Gross weight	kg	40/49	40/49	40/49	50/58	50/58	50/58	60/68	60/68	60/68
Loading	40 GP	set 145	145	145	90	90	90	84	84	84
	40 HQ	set 158	158	158	98	98	98	98	98	98

Console Indoor Unit

50/60 Hz

Model			INV2-22C1S	INV2-28C1S	INV2-36C1S	INV2-45C1S	INV2-50C1S
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.0
	Heating	kW	2.5	3.2	4.0	5.0	5.5
Power supply	V/Ph/Hz		220-240/1/50 & 208-230/1/60				
Power consumption	W		15	15	20	40	40
Airflow volume(H/M/L)	m ³ /h		400/320/270	400/320/270	480/400/310	680/600/500	680/600/500
	CFM		235/188/159	235/188/159	282/235/182	400/353/294	400/353/294
Rated Current ¹	Cooling	A	0.15	0.15	0.15	0.15	0.15
	Heating	A	0.15	0.15	0.15	0.15	0.15
	Water Heating	A	/	/	/	/	/
ESP	Pa		0	0	0	0	0
Sound pressure level(H/M/L)	dB(A)		38/33/27	38/33/27	40/37/32	46/43/39	46/43/39
Connecting pipe diameter	Liquid	mm	6.35	6.35	6.35	6.35	6.35
	Gas	mm	9.52	9.52	9.52	12.7	12.7
Drain pipe	External dia.	mm	17.2	17.2	17.2	17.2	17.2
	Thickness	mm	1	1	1	1	1
Dimension (WxDxH)	Outline	mm	700x215x600	700x215x600	700x215x600	700x215x600	700x215x600
	Package	mm	780x285x682	780x285x682	780x285x682	780x285x682	780x285x682
Net weight/Gross weight	kg		16/19	16/19	16/19	16/19	16/19
Loading	40' GP	set	387	387	387	387	387
	40' HQ	set	433	433	433	433	433

Floor Standing Type

50/60 Hz

Model			INV2-160FS 1S	INV2-140FS 1S
Capacity	Cooling	kW	10	14
	Heating	kW	11	15
Power supply	V/Ph/Hz		220-240/1/50 & 208-230/1/60	
Power consumption	W		185	185
Airflow volume(H/M/L)	m ³ /h		1850/1600/1400	1850/1600/1400
	CFM		1089/942/824	1089/942/824
Rated Current ¹	Cooling	A	1.5	1.5
	Heating	A	1.5	1.5
	Water Heating	A	/	/
ESP	Pa		0	0
Sound pressure level(H/M/L)	dB(A)		50/48/46	50/48/46
Connecting pipe diameter	Liquid	mm	9	9
	Gas	mm	16	16
Drain pipe	External dia.	mm	31	31
	Thickness	mm	4.5	4.5
Dimension (WxDxH)	Outline	mm	1870x580x400	1870x580x400
	Package	mm	2083/738/545	2083/738/545
Net weight/Gross weight	kg		54/74	57/77
Loading	40' GP	set	67	67
	40' HQ	set	67	67

Fresh Air Processing Indoor Unit

50 Hz

Model			INV2-FAIR1401S*	INV2-FAIR2241T*	INV2-FAIR2801T*	INV2-FAIR2801T-A*	INV2-FAIR4501T*
Capacity	Cooling	kW	14.0	22.4	28.0	28.0	45.0
	Heating	kW	10.0	16.0	20.0	20.0	32.0
Power supply	V/Ph/Hz		220-240/1/50				
Power consumption	W		380	740	760	1060	1240
Airflow volume(H/M/L)	m ³ /h		1200	2000	2500	3000	4000
	CFM		705	1175	1470	1765	2355
Rated Current ¹	Cooling	A	1.82	1.32	1.36	1.89	2.22
	Heating	A	1.82	1.32	1.36	1.89	2.22
	Water Heating	A	/	/	/	/	/
ESP	Pa		150	200	200	200	200
Sound pressure level(H/M/L)	dB(A)		42	47	48	51	52
Connecting pipe diameter	Liquid	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ12.7
	Gas	mm	Φ15.9	Φ19.05	Φ22.2	Φ22.2	Φ28.6
Drain pipe	External dia.	mm	25	25	25	25	25
	Thickness	mm	2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline	mm	1463 x 756 x 300	1500 x 1000 x 500			1700 x 1100 x 650
	Package	mm	1514x785x360	1840x1200x675			1890x1460x835
Net weight/Gross weight	kg		63.5/71	130/182	134/188	134/188	268/288
Loading	40' GP	set	84.0	18.0	18.0	18.0	16.0
	40' HQ	set	98.0	18.0	18.0	18.0	16.0

Note: * This series can be matched with INV2 (Top discharge outdoor unit) only

Control System



Smart Model Selection Software and Debugging Software

Model Selection Software

Inventor multi VRF selection software is a kind of advanced computer program for selecting models automatically in sales and project bidding. It integrates multi VRF selection logic and computer software to provide a user-friendly interactive interface, which is able to automatically recommend suitable models to user according to ambient condition of project and user's demand. It is applicable for INV2.

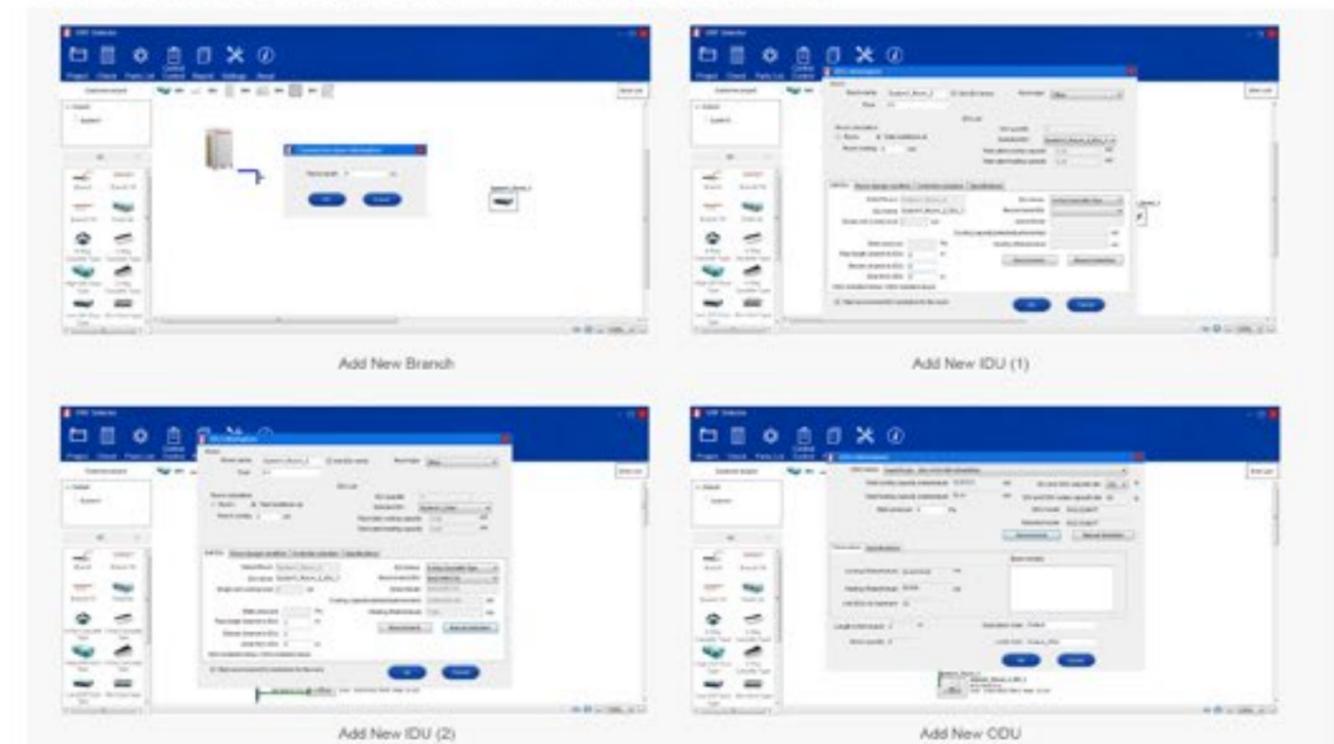
Flexible Setting of Project Design Conditions

When setting up a new model selection project, the information of customer, designer, unit series and working conditions, etc. can be set as relevant parameters of model selection, and then sent to data report for checking during project design.



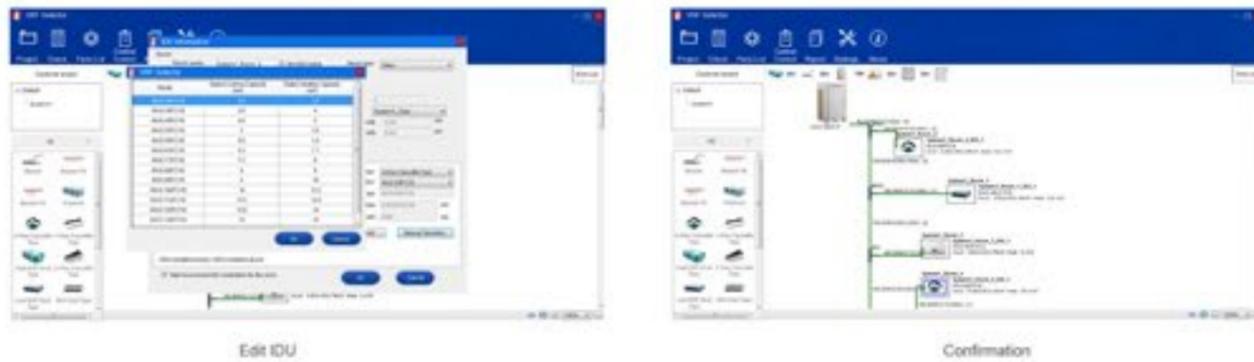
Accurate Recommendation of Indoor Unit and Outdoor Unit

When selecting indoor unit model with the software, you can use automatic recommendation way only by inputting the required air conditioning load and indoor unit series. Then the software will recommend the suitable indoor unit model automatically according to model selection logic. When selecting outdoor unit model, you can use automatic recommendation way directly to select the suitable outdoor unit model.



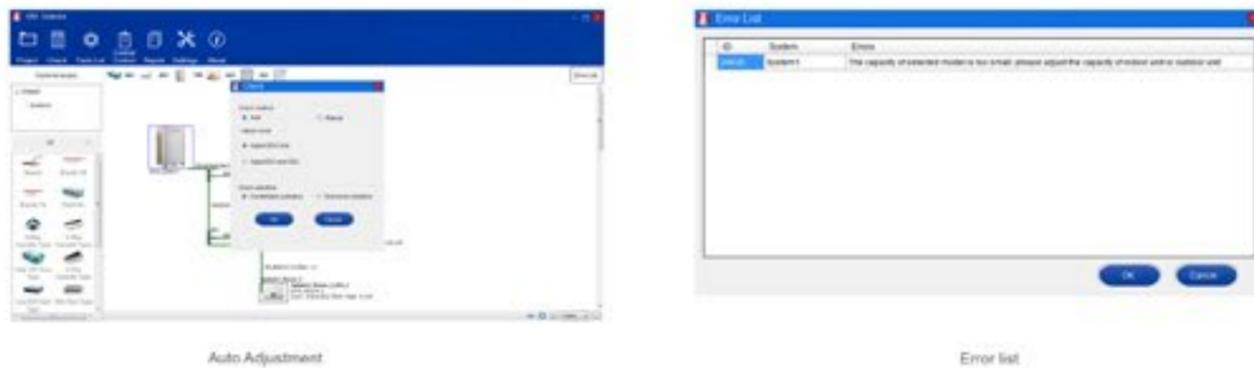
Free Modification of Selected Models

If you are not satisfied with the system recommended by the software, you can select or adjust indoor unit model by "Manual selection" function.



System Adjustment

When reselection is needed due to major change of indoor unit, you can use "Check" function to adjust the selection automatically or manually.



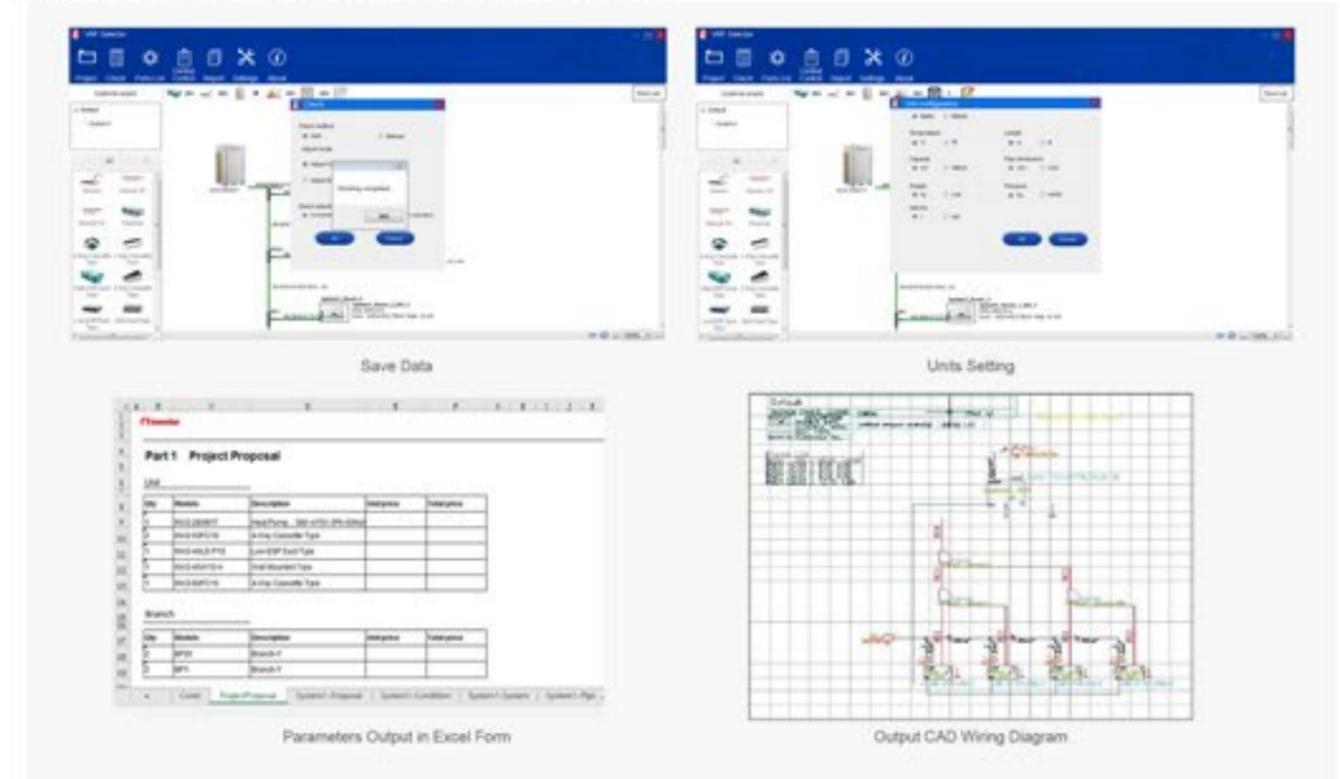
Optional Controller Configuration and Electric System Configuration

The software will offer controller model matched with the system. The user only needs to choose controller type and then the software will output the controller model into the report.



Save Model Selection Project, Output Data Report and System Wiring Diagram

After finishing system selection and various system configurations, the user can save model selection project freely for future reference. Then the user can output relevant parameters of selected project in an excel form and output system wiring CAD diagram for reference in installation.



Intelligent Debugging Software

INV2 offers an intelligent debugging software to the end-users for faster construction needs.

Monitoring Functions

- Fully control the operation status of each device of the system;
- Hover the mouse over the parameter to display its remarks.
- The online devices will be displayed in a tree structure;
- Display the information of air conditioner in divided regions;
- Each display region can be moved or concealed;
- Display updated status of units in real time;



Control Functions

- Control the operation of unit as you like;
- Comprehensive control of outdoor unit, indoor unit, water tank, hydro box, etc.;
- Real-time display of current status or status after being controlled;
- Both single control and group control are available.



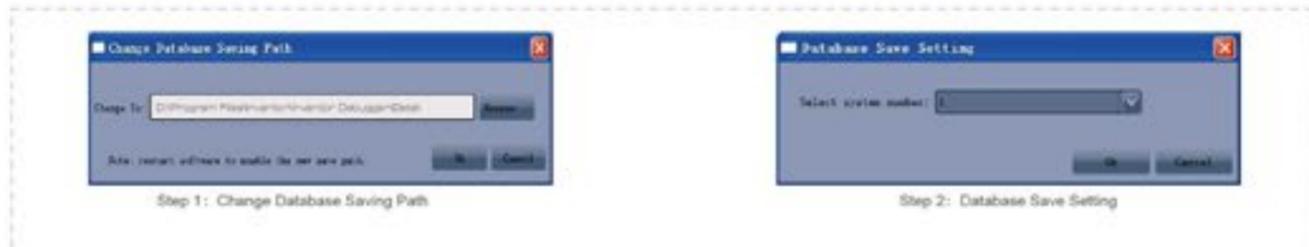
Project Debugging Functions

- One-click and automatic project debugging;
- Project debugging is arranged step by step from left to right;
- Manual intervention and skipping of some debugging phases are available.
- Green icons will be displayed for the items finishing debugging; red icons will be displayed for the items having debug exception; light yellow icons display debugging information;



Auto Data-Saving Function

Data will be saved automatically. Database saving path can be changed or data document can be generated repeatedly.



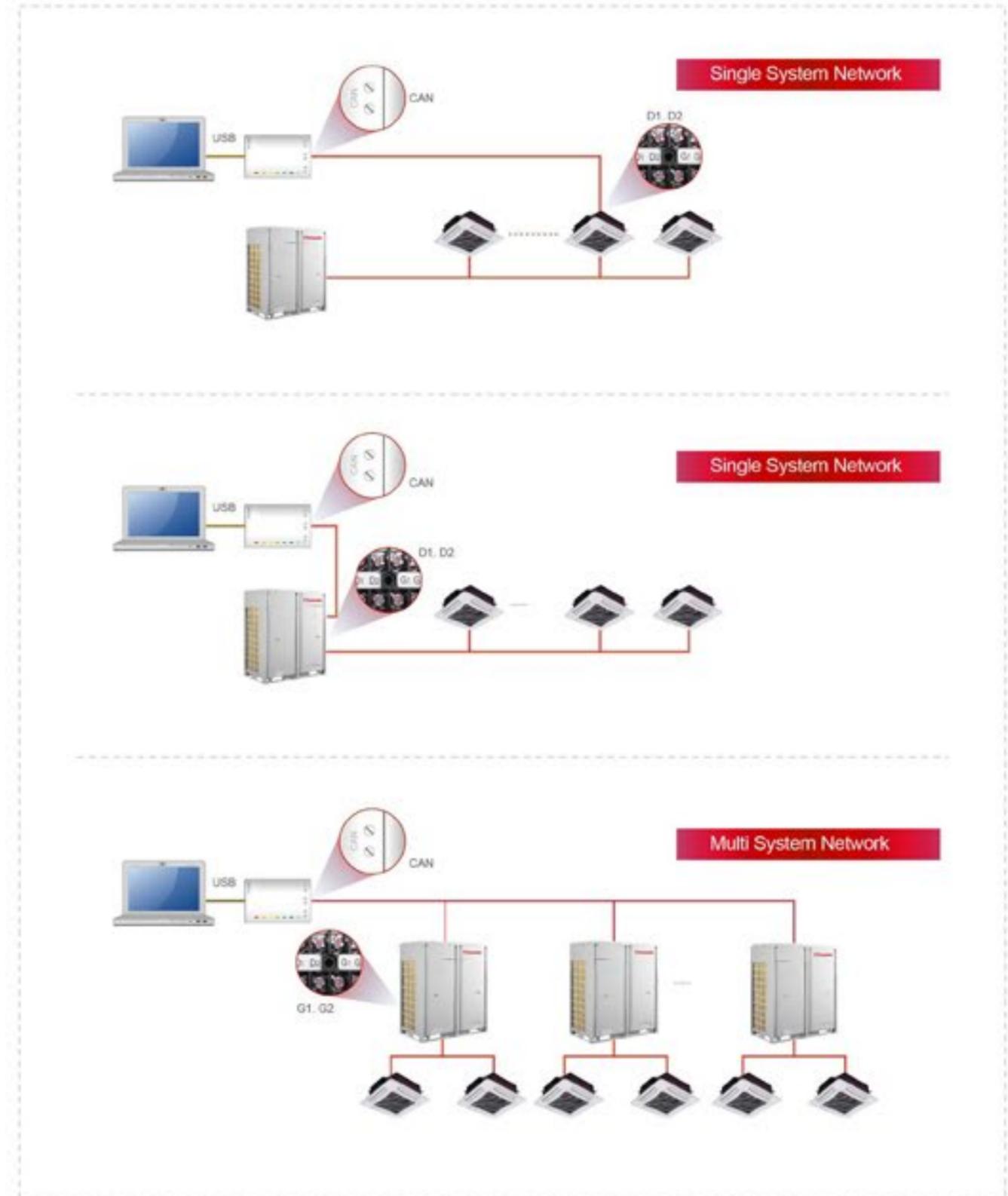
USB Data Converter

Users can use USB data converter to freely convert CAN/HBS/RS485 data into USB data, achieving data interchange between computer and air conditioner.



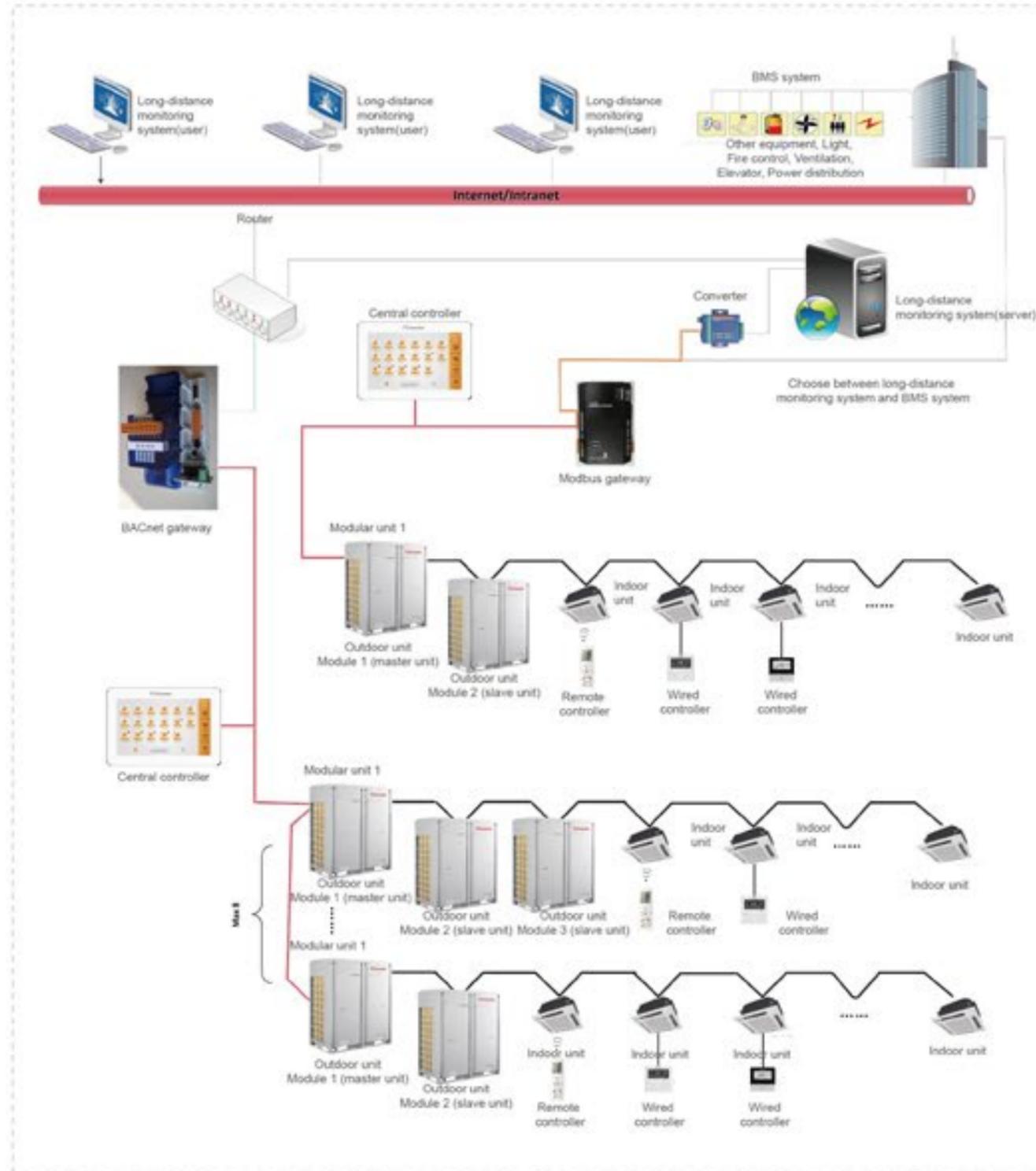
Auto Direction of Connection Way

The wiring diagram will direct connection way automatically, so that the user can get the connection way quickly.



Multiple Intelligent Remote Control Management

Inventor INV2 provides multiple intelligent controls in order to satisfy all demands. It can control both a room and a building at the same time.



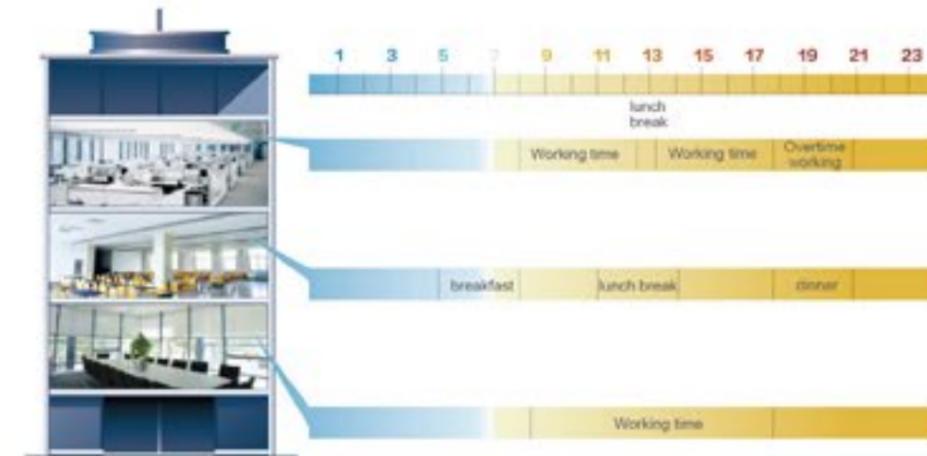
Visualized Management

- System has a map that can display air conditioners' locations in rooms and buildings.
- System is able to measure the status and number of air conditioners in different levels



Everyday Management

- **Setting for daily operation**
 - a. Management in days/weeks/months/years
 - b. Management in each unit
 - c. Simple display for management
- **Other functions**
 - a. Power on/off, modes, humidity, fan speed
 - b. Waste of energy that may be caused by forgetting to turn off the air conditioner can be avoided
- **Everyday Management at different locations**
 - a. Management for overtime working
 - b. Management for meal breaks
 - c. Management for working time



Group Management

- **Central management in groups**
 - a. Free choices of dividing groups
 - b. Central control over power on/off
 - c. Central control over temperature
 - d. Central control over modes
 - e. Central control over user authority



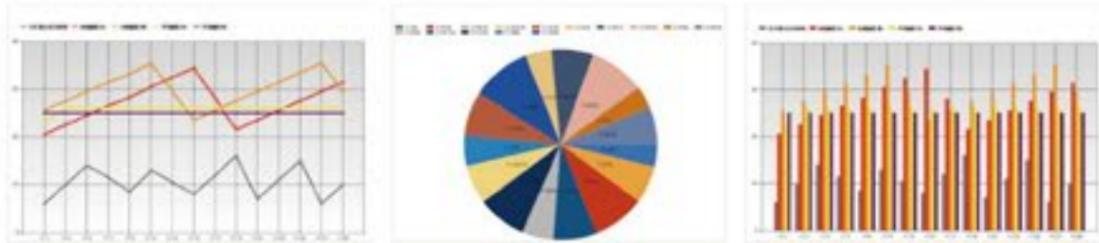
Authority Management

- **Only for indoor units**
 - Limited control over power on/off
 - Limited control over temperature
 - Limited control over modes



Statistics Analysis

- **Recording statistics**
System can self generate graphs of statistics for easy management and analysis.
- **Recording errors**
System can show the information of errors in charts and send alarms of errors through emails.
- **Recording operation**
System can record users' daily operation.



Calculating Cost of Electricity

- Auto calculation according to users
- According to the operating time, modes, flow of refrigerant, humidity and other factors, system can calculate the cost of electricity for users in different locations.
 - Detailed information of bills and operation can be provided.



Energy Management

- **Analysis of energy cost**
 - Air conditioners that cost much energy
 - Air conditioners that are set in low temperature
 - Air conditioners with bad cooling performance

- **Ways to save energy based on the following aspects:**
 - Operating time
 - Unit is on too early
 - Unit is off too late
 - Comfort
 - Cost of electricity/cost of electricity per square meter

Energy saving

- **Limits on electricity**
 - Analysis on the cost of electricity
 - Set the maximum cost of electricity and unit will be operating in limited conditions when the maximum number is reached.
 - System can remind users the cost of electricity during operation and give suggestions on energy saving.
- **Economic operation**
System is able to operate under an energy-saving condition



VIP Management

System can provide independent and unique service to VIP users.



Wired Controller and Remote Controller

There are two kinds of controllers: wired controller and remote controller. The system provides various controls for users, such as cooling, heating, dehumidifying and fan etc., users can select it flexibly according to their own using methods.

Wired controller XK46



- LCD with black background and white words; touch buttons;
- Clock can be displayed and set; 24 hours timer setting for on/off;
- 7 levels of fan speed, up & down swing and left&right swing;
- Can be switched in auto, cooling, dehumidifying, fan, heating, floor heating, 3D heating and space heating operation modes;
- Master and slave wired controllers can be set; simultaneous control over several IDUs is available;
- Available functions: sleep, ventilation, quiet/auto quiet, light, energy saving, auxiliary heating, drying, memory, low-temperature dehumidifying, absence in heating, controllable auxiliary heating in dehumidifying, filter cleaning reminder, etc.;
- Detect ambient temperature; receive infrared remote controller signal;
- With project parameters viewing and setting functions.

Wired controller XK49 (For hotel)



- With simplified functions, mechanical buttons, back lighting LCD and convenient operation;
- Can be switched in auto, cooling, dehumidifying, fan and heating operation modes;
- Master and slave wired controllers can be set; simultaneous control over several IDUs is available;
- Detect ambient temperature; receive infrared remote controller signal;
- With system parameters viewing and setting functions;
- 7 levels of fan speed, up&down swing;
- Door control system can be connected.

Remote controller YAP1F



- Can be switched in auto, cooling, dehumidifying, fan and heating operation modes;
- Besides turbo, 6 levels of fan speed can be set;
- Available functions: child lock, drying, health, ventilation, turbo, sleep, light, absence, I-feel and timer;
- Clock display and indoor/outdoor ambient temperature viewing functions;
- Up & down swing and left & right swing.

Remote Controller YV1L1



- Back lighting LCD;
- Can be switched in auto, cooling, dehumidifying, fan, heating, floor heating, 3D heating and space heating operation modes;
- 7 levels of fan speed, up&down swing and left&right swing;
- Available functions: child lock, energy saving, drying, health, ventilation, quiet/auto quiet, sleep, light, absence, low-temperature dehumidifying, I-feel and timer;
- With clock display, system parameters viewing and setting functions.

Wired controller XK55



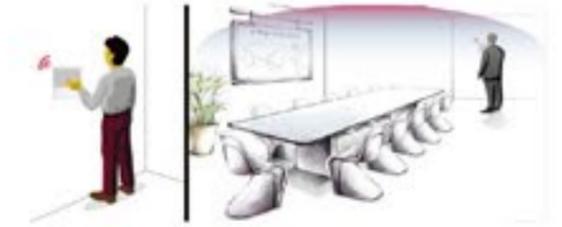
- Elegant appearance;
- High-resolution color LCD;
- Capacitive touch control; receive infrared remote controller signal;
- Various timing functions: three weekly timers and one countdown timer can be set simultaneously; mode, temperature and fan speed can be preset in weekly timer;
- Complete system functions; each function will be implemented in an individual page with interactive and humanized interface;
- Various personalized functions, e.g. setting brightness and backlight time;
- Sufficient viewing functions, e.g. viewing on/off status and after-sales service hot line.



- **Single control of one unit**
Each indoor unit has an independent controller.



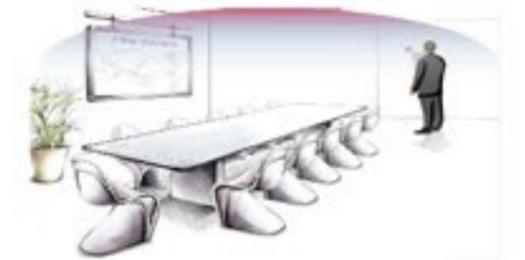
- **Multiple control of one unit**
One indoor unit can be controlled by several wired controllers at different places.



- **Central control of several indoor units**
One wired controller can control as many as 16 indoor units.



- **Joint control of remote controller and wired controller**
Users can control one unit with two types of controllers: a remote controller which is convenient and flexible; or a wired controller which includes every function of an air conditioner.



Smart Zone Controller and Central Controller

Smart zone controller CE53-24/F(C)



- 1280*800 high-resolution color LCD;
- 7" capacitive touch screen for easy operation;
- Shielding function of single unit, group and all IDUs (shielding on/off, mode, temp setting, etc.);

- With various functions: centralized control(control all indoor units), group management(support DIY grouping), schedule management(setting of several schedules) and single unit control(on/off, mode, temp setting, fan speed, quiet, swing control, etc.);
- Provide naming of indoor units, selection of icons and personalized settings(setting background, backlight, etc);
- Up to 32 units can be centrally controlled;
- Elegant and fashionable appearance;
- Embedded installation in wall with projecting thickness only of 11mm;
- Connectable with network of indoor units or outdoor units;
- Independent power supply in 110~240V wide voltage range;
- With project setting, parameter viewing, malfunction record and access management functions.

Central controller CE52-24/F(C)



- 1280*800 high-resolution color LCD;
- 7" capacitive touch screen for easy operation;
- With project setting, parameter viewing, malfunction record and access management functions.

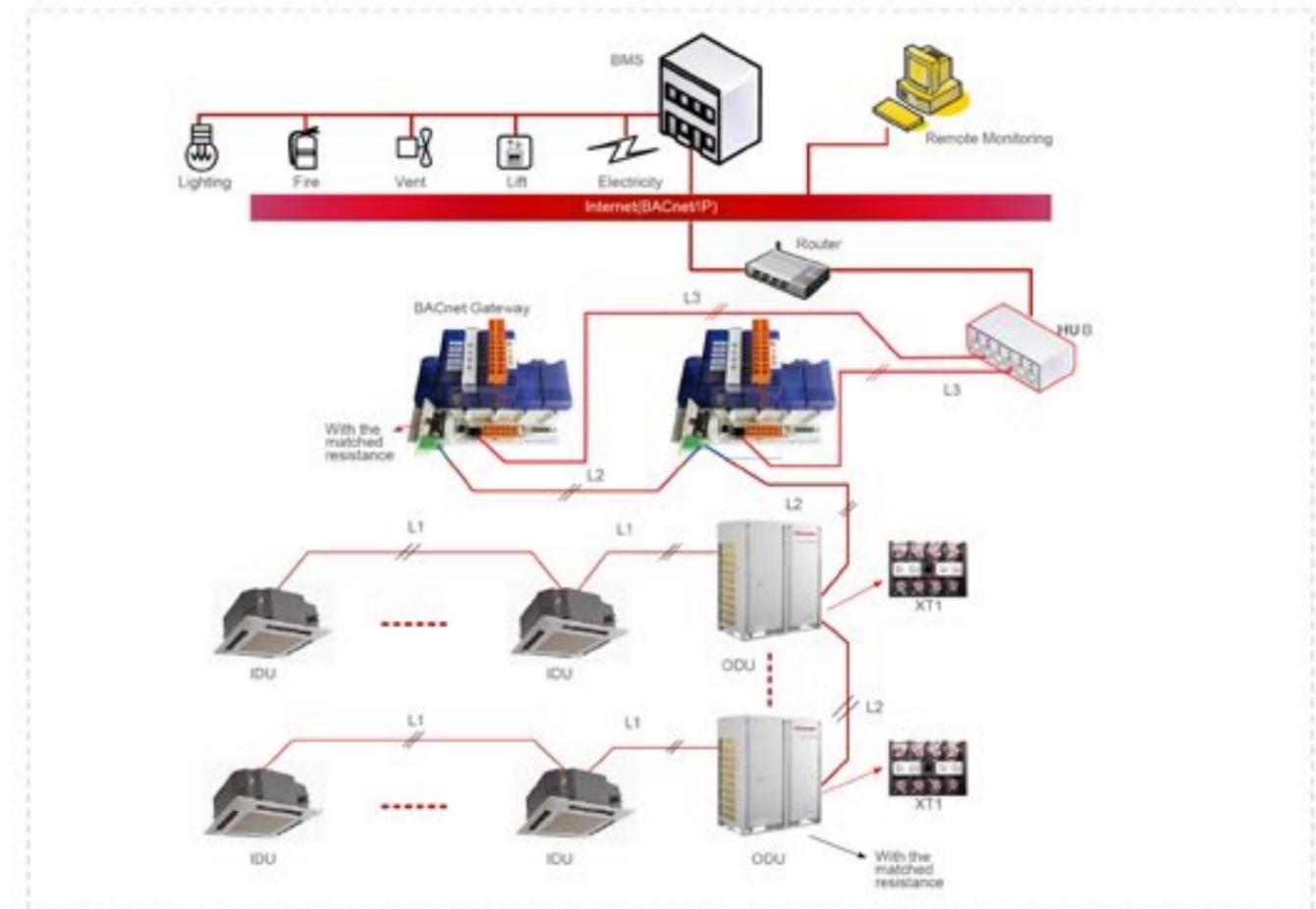
- With various functions: centralized control(control all indoor units), group management(support DIY grouping), schedule management(setting of several schedules) and single unit control(on/off, mode, temp setting, fan speed, quiet, swing control, etc.);
- Shielding function of single unit, group and all IDUs (shielding on/off, mode, temp setting, etc.);
- Provide naming of indoor units, selection of icons and personalized settings(setting background, backlight, etc);
- Up to 128 units can be centrally controlled;
- Elegant and fashionable appearance;
- Embedded installation in wall with projecting thickness only of 11mm;
- Connectable with network of indoor units or outdoor units;
- Independent power supply in 110~240V wide voltage range;

BACnet Gateway

BACnet gateway kits MG30-24/D2(B) are intended to realize the data exchange between the air conditioning unit and BAS, and providing the standard BACnet/IP building interface and 8 I/O interfaces, one of which is the fire alarm signal interface. The status of the other 7 I/O interfaces is mapped to the specific objects of the BACnet/IP bus and can be defined by the user.



Applicable models: INV2 All DC Inverter Multi VRF System, INV2 DC Inverter Multi VRF System, INV2 DC Inverter Water Cooled Heat Pump Multi VRF System.

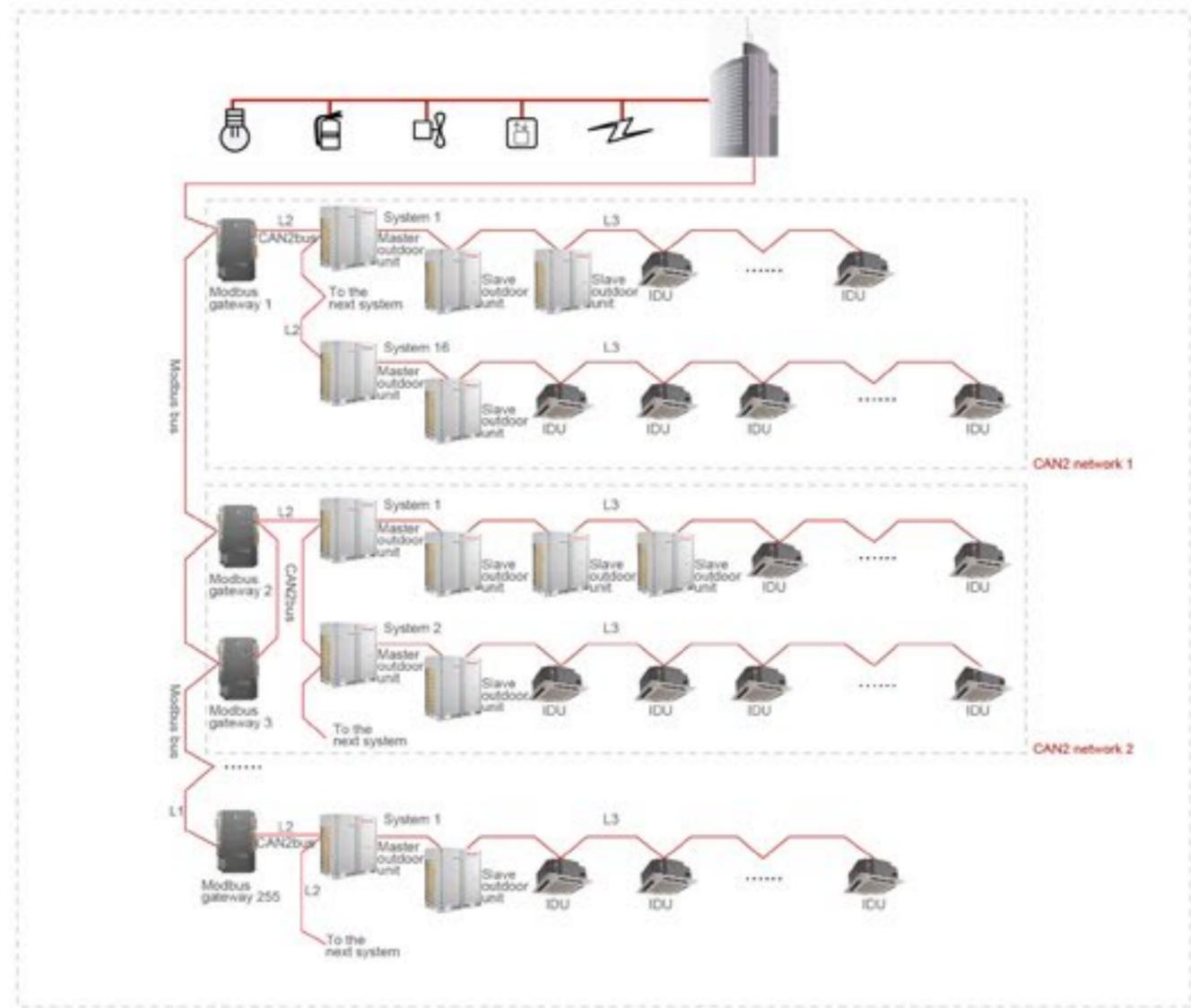


- International standard BACnet/IP interface, which has passed BTL certification;
- Real-time monitoring of unit operation status, e.g. on/off, mode, temperature;
- Real-time response to the control of unit (on/off, mode setting and speed setting, etc.) by monitoring software;
- Monitor unit errors;

- Lock unit operation statuses, directing at all control functions of unit itself or a certain setting function;
- Achieve cooling and heating temperature limitation functions;
- 8 DI/DO interfaces for receiving fire alarm signal and user's definition logic;
- Big storage capacity of unit operation data for 6 months.

Modbus Gateway

Modbus Gateway provides INV2 system with the Modbus protocol interface when connecting to the Building Management System(BMS) in order to achieve central control and remote control over INV2 system by BMS.



Applicable models: INV2 All DC Inverter Multi VRF System, INV2 DC Inverter Multi VRF System, INV DC Inverter Water Cooled Heat Pump Multi VRF System.

- Real-time monitoring of unit operation status, e.g. on/off, mode, temperature;
- Real-time response to the control of unit (on/off, mode setting and speed setting, etc.) by monitoring software;
- Control all the units switches of on and off.
- Monitor unit errors;
- One Modbus bus can support up to 255 gateways. One Modbus gateway can support at most 16 outdoor units(up to 64 modular outdoor units) and 128 indoor units;
- Lock unit operation statuses, directing at all control functions of unit itself or a certain setting function;
- Linkage control, supporting 5 DI and 5 DO for receiving fire alarm signal and user's definition logic;
- CAN, RS485 communication ports are non-polar, convenient for construction wiring;
- Achieve cooling and heating temperature limitation functions;
- 100-240 VAC, 50/60Hz wide voltage range, adapted to the power supply of each country and region.

Control System Lineup

Controlling system		Product series	Cassette Type	(High ESP Low ESP Slim Ducted) Duct Type	Fresh Air Processing	Wall mounted Type	Floor Ceiling Type	Console Type	Floor Standing Type	Air Handler
Wireless Controller	YAP1F		●	○	○	●	●	●	●	○
	YV1L1		○	○	○	○	○	○	○	○
Wired controller	XX46		○	●	●	○	○	○	○	●
	XX49		○	○	○	○	○	○	○	○
	XX55		○	○	○	○	○	○	○	○
	JS05(receiver)			○	○					
Centralized Controller	CE52-24(F)(C)		○	○	○	○	○	○	○	○
Smart Zone Controller	CE53-24(F)(C)		○	○	○	○	○	○	○	○
Long-distance monitoring software	FE31-00(AD)(BM)		○	○	○	○	○	○	○	○
BMS Accessories	Communication module(modbus)	ME30-24/E4(M)		○	○	○	○	○	○	○
	GMV BACnet gateway (BACnet)	MG30-24/D2(B)		○	○	○	○	○	○	○
Other modules	Optoelectronic isolated converter	RS232-RS422/485		○	○	○	○	○	○	○
	Optoelectronic isolated signal multiplier	RS-422/485		○	○	○	○	○	○	○

Note: ● means standard, ○ means optional.

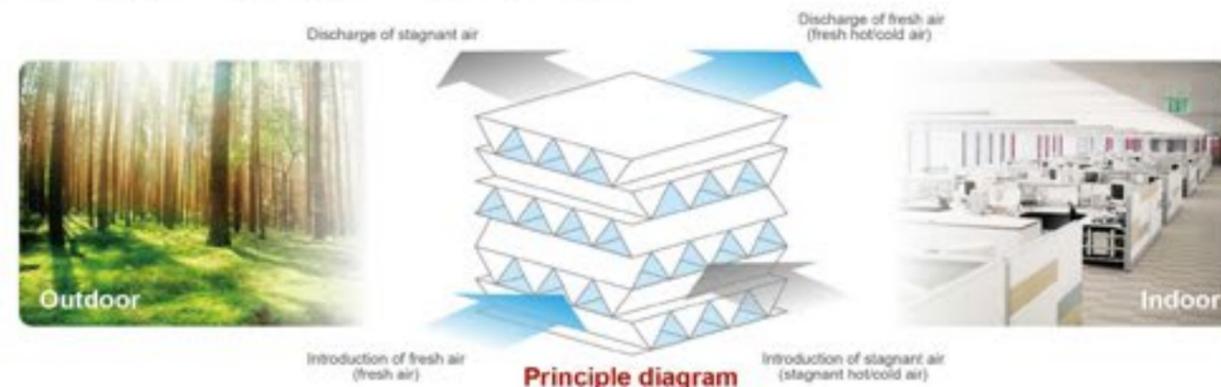
Energy Recovery Ventilation(ERV)



- Air flow: 350~3000m³/h
 - Energy Recovery Ventilation System can introduce the fresh air freely on the condition that all the windows closed or exhausted fan uninstalled. It can solve the problem of stagnant air effectively.
- It is usually installed in the ceiling of corridor and supplies fresh air to each room through ducts.

Adopt Advanced Heat Exchange Core

ERV adopts cross flow plate exchanger with air volume below 3000m³/h. Fresh air will be introduced and internal leakage is low, which effectively prevent pollution to fresh air.



Double-way Ventilation for Fresh Air

ERV can not only introduce lots of fresh air, but also discharge the stagnant air at the same time, which effectively minimizes the toxic air from the inner and other materials. The ventilation effect is very obvious, ensuring enough supply of fresh air to the indoor space.

No Cross Contamination for Ensuring Healthy Fresh Air

The unique cross-flow heat exchange valve sub-assy is adopted. There is only energy exchange between indoor air and outdoor air with little exchange of air, which effectively prevents cross contamination and "air-condition" disease.



Pretreatment of Fresh Air for Energy-saving

When fresh air is introduced, its temperature and humidity will be exchanged with the discharged warm air. As the fresh air is preheated and humidified, energy is saved and load of unit is reduced.

Control System Lineup

Control system			Product series	ERV 
Wired controller	Z3N151			●
Interface of the main board	BMS			●
Optoelectronic isolated converter	RS232- RS422/485			○
Optoelectronic isolated signal multiplier	RS-422/485			○

Note: ● means standard, ○ means optional.

Note

Note



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