# Hisense



Inverter-Driven Multi-Split Central Air Conditioning



# **Hisense Corporation**

Add: 8th Floor, Hisense Tower, 17Donghai Xi Road, Qingdao 266071, P.R.China

Tel: +86-532-80878829 Fax: +86-532-83891833 E-mail: export-vrf@hisense.com

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# Hi-Flexi · Hisense Line Quality

Hisense Hi-Flexi Series stems from Hisense high-quality and high-grade intelligent Commercial Central Air Conditioning. It relies on Hisense high technical platform of inverter-driven central air conditioning and has a brand gene of high-tech and high-quality from the date of birth which perfectly implements Hisense's value concept —"create perfect, service society"

Hisense Inverter-driven Central Air Conditioning Hi-Flexi M Series standing on the high level of multi-split technology adopts high efficient high pressure chamber compressor and leading inverter control technology, which further improves the system performance and energy efficiency. The modular combination method realizes the system capacity of 8~48HP in a 2HP increment by combining 5 base units from 8HP to 16HP. Such a strong lineup provides better air conditioning solution for work, leisure and living space.

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# **Technological Hisense**

Hisense is a large electronic information industry corporation of China founded in 1969 and owns Hisense Appliance and Hisense Kelon Appliance these two listed companies. Furthermore, Hisense is the only enterprise group in China which has three well-known trademarks as Hisense, Kelon and Ronshen at the same time.

Hisense adheres to the development strategy as "Technology Support, Steady Operation" and sustains healthy development by taking optimized industrial structure as the base, technological innovation as the drive force, capital operation as a leverage. In the 21st century, with powerful R&D strength and excellent internationalized management team, Hisense has speeded up the pace of industrial expansion and formed an industrial structure including digital multimedia, home appliances, communications, intelligent information systems, modern real estate and service.



Multimedia Products



Information Communication Products



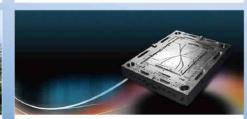
Real Estate and Property Management



Home Appliances



Commercial Equipment



Mould and Industrial Design







# High Quality User Experience Energy-saving, Comfortable, Healthy and Environmentally Friendly

Hisense Hi-Flexi inverter-driven central air conditioning brings customers ultimate high quality experience -- Comfort, Health, Energy-saving!

# Hi-Flexi, Hisense Hi Quality!

Hisense Hi-Flexi M series inverter-driven central air conditioning integrates Hisense superb product quality --"Hisense Hi Quality", high energy efficiency, high technology, high flexible installation and perfect after-sale
service, which strives to provide high level and high quality environment experience for customers.

Precise temperature control, even air supply, more comfort and fresh air take care of every corner of space.

# 01 Hi-Flexi M Series Lineup



Heating Capacity	kBtu/h	92.1		107.5		128.0	153.5		170.6
Model		AVWT-182U	AVWT-190	U AVWT-210U	AVWT-232U	AVWT-250U	AVWT-272U	AVWT-290U	AVWT-307U
Cooling Capacity	kBtu/h	181.5	191.1	209.8	232.0	249.1	267.8	290.0	307.1
Heating Capacity	kBtu/h	199.6	215.0	235.4	261.0	278.1	298.6	324.1	341.2
Combinatio	n	8HP+10HP	10HP+10H	P 8HP+14HP	10HP+14HP	12HP+14HP	14HP+14HP	14HP+16HP	16HP+16HP



Model		AVWT-328U	AVWT-345U	AVWT-365U	AVWT-386U	AVWT-402U	AVWT-426U	AVWT-444U	AVWT-460U
Cooling Capacity	kBtu/h	327.6	344.6	363.4	385.6	402.6	421.4	443.6	460.6
Heating Capacity	kBtu/h	368.5	385.6	406.0	431.6	448.7	469.2	494.7	511.8
Combinatio	n	8HP+10HP+16HP	10HP+10HP+16HP	12HP+12HP+14HP	12HP+12HP+16HP	12HP+14HP+16HP	12HP+16HP+16HP	14HP+16HP+16HP	16HP+16HP+16HP

# **02 Precise Temperature Control, Even Air Supply**

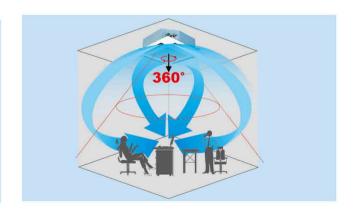
#### Precise Room Temperature Control

Hi-Flexi sets temperature sensors on air outlet /air inlet of indoor units and remote controller, and adopts microcomputer control 2000-pulse high precision electronic expansion valve to adjust refrigerant flow rate, which can maintain the room temperature within 0.5°C of setting temperature and satisfy the indoor comfort requirement.

# Too Hot Temperature Control Comfortable 105 Setting Temp. Too Cold Temperature Control

#### Circulating Airflow, Even Air Supply

Hisense 4-way cassette type distributes the airflow to every corner of the room by 360°air supply and adjustment of louver position. All-directional circulating airflow contributes to avoid the dead air in corner, creates the most comfortable space with uniform temperature.



# **03 Top Class Low Noise Design**

#### Indoor Unit Noise Control

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



#### **Outdoor Unit Noise Control**



#### Adoption of Hitachi High Pressure Chamber Scroll Compressor

Sophisticated manufacturing technology contributes to little vibration and low noise level.



#### Noise Deadening of Fan Motor

The material of fan motor is cast aluminum. The motor bracket is of non-resonant hanger structure, which ensures stable motor performance, lowers vibrating noise.

#### New Efficient Axial Fan

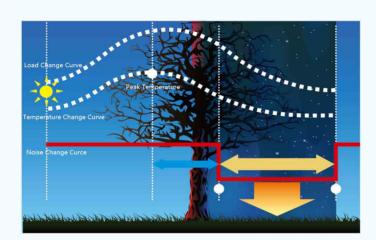
The newly developed efficient axial fan with new blade shape helps decrease turbulence around. It is made of special material which has an obvious effect to absorb vibrating noise and minimizes the "Buzz" dramatically.



Optimized Radial Airflow Angel

#### Low Noise Mode at Night

The outdoor unit has a peculiar function of night-shift setting, which reduces the noise level by max.10dB (8HP) when in full-load operation.



# 04 The Advocate and Practicer of Low Carbon Life

### **RoHS Reaction**

Actively respond to Europe RoHS directive, control the use of hazardous substance strictly. RoHS stands for Restriction of Hazardous Substance Directive, which specifies six substances (Lead (Pb), Mercury(Hg), Cadmium(Cd), Hexavalent chromium(Cr), PBDE orPBB) banned from using in electrical and electronic equipment. Hisense actively reponded to RoHS directive and implemented a series of programs and measures, which aims to preserve human health and ensure that the recycling and treatment of waste eletronic and electrical equipment meet the environmental stardard.



## R410A Refrigerant, Protect Ozone Laver

Hi-Multi adopts non-toxic and harmless environmentally friendly refrigerant R410A which has been worldwide affirmed and applied.



# **High Technology Support Platform Creates Hisense High Quality Product**

Technology says quality. Continuous progress of Hisense technology leads to continuous improvement of product quality. With the technological principle of "Emotional Technology" and the drive force of humanized technology, Hisense targets high quality products and offers high quality products to customers through constant transformation, optimization and improvement of technology on the platform of Hisense inverter-driven central air conditioning

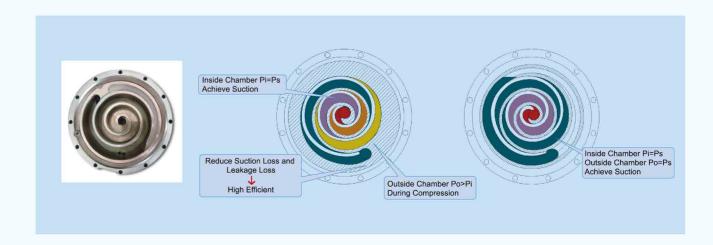
# 01 Hitachi High Efficient High Pressure Scroll Compressor

Hi-Flexi adopts large capacity high-pressure chamber scroll compressor with an interior oil separating section, which maintains most of lubricating oil in compressor by the use of the interior oil mist separator and oil-returning pipe design. Only much less oil is discharged from compressor along with refrigerant, which avoids cooling capacity decrease due to redundant oil in refrigeration cycle, further improves efficiency.



# Exclusive Asymmetric Scroll Technology

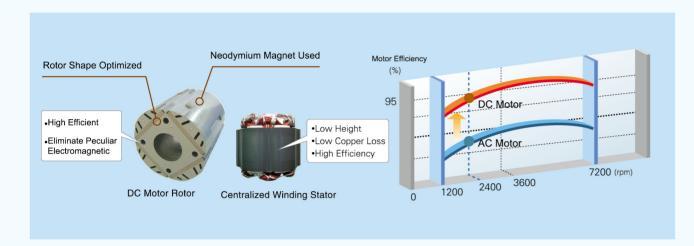
The asymmetric scroll structure of Hitachi compressor effectively helps reduce the refrigerant gas leakage loss in the process of suction and compression, enhances operating efficiency and reliability.





### DC Inverter-driven Compressor

By the use of DC motor, the performance is improved at around 20~40Hz where the operation time of the inverter compressor is longest. Meanwhile, the rotor of compressor's motor is divided into two parts to suppress electromagnetic interference (EMI) which achieves low noise.



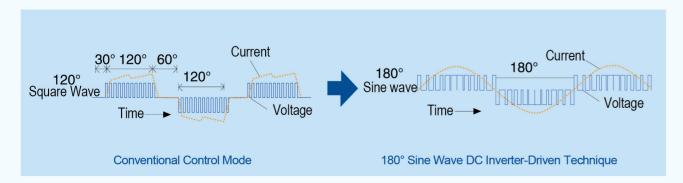
# **02 DC Inverter-Driven Technique**

The operating speed of DC motor in compressor can be adjusted continuously and freely relating to the variability of system capacity. This technique integrated with auto-adaptive control technique automatically adjusts capacity output according to actual air conditioning load in order to achieve a smoother curve of temperature fluctuation to satisfy higher requirements of coziness.



# 180°Sine Wave DC Inverter-Driven Technique

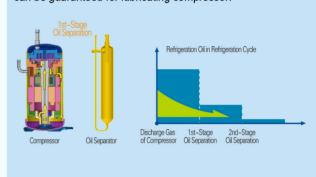
The application of advanced sensorless three phase vectoring control technique on permanent magnetism synchronous motor ensures the output current of DIP-IPM DC inverter to be a smooth sine wave curve, and accordingly enables motor to operate smoothly with efficiency dramatically increased. At the same time, both harmonic current and electromagnetic noise are suppressed.



# 03 Oil Control Technique, Improve the Reliability

#### High Efficient Oil Separating Technique

The system can operate safely and reliably by the use of interior oil-separating section and exterior oil separator. Much less oil enters refrigerating circulation, accordingly enough oil can be guaranteed for lubricating compressor.



#### Oil-equalization Control Technology Between Outdoor Units

Synthetic application of scroll compressor with internal oil separating function, efficient external oil separator, accumulator, and intelligent oil level control technology regulates the oil level within the appropriate limits, ensures oil balance between outdoor units, and guarantees system stability and reliability



#### Oil Return Contol

Oil return operation conducted according to the operation frequency and operation time of compressor effectively avoids the oil retention in indoor heat exchanger and outdoor heat exchanger and reduces the compressor failure due to inadequate refrigeration oil. After oil return control, system returns to previous operation automatically.

# **04 Intelligent Defrosting, Rapid Heating**

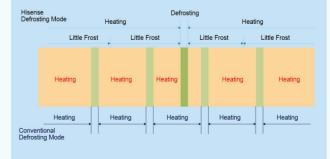
#### Rapid Heating Start-up

Combining the soft start of DC inverter compressor and rapid start of fixed speed compressor, the system can achieve 100% heating capacity output instantly and quickly meet the air-conditioning demand. (Taking 48HP as an example)



#### Intelligent Defrosting Mode

Frosting doesn't occur frequently and the short defrosting time ensures heating effect in winter.



- Outdoor unit adopts the outdoor temperature sensor and heat exchanger temperature sensor, and precisely calculates the defrosting time.
- Through the adjustment of outdoor fan, electronic expansion valve and compressor frequency, defrosting frequency and defrosting time can be largely reduced.



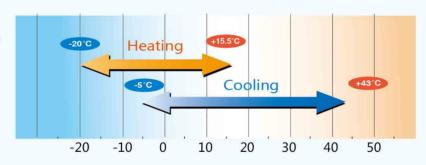
# **05 Rotational Operation to Distribute Load of Outdoor Units**

Regulating the operation time of each outdoor unit leads to load reduction on compressors. Therefore, outdoor unit endurance is improved.



# **06 Wide Working Range**

Hi-Flexi M Series can handle a wide range of outside air conditions, thus extending the flexibility of installation space and climatic environment.

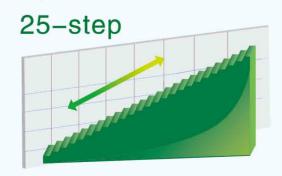


# **07 25-Step Fan Speed Control**

The DC variable-speed motor is adopted in outdoor unit, which results in efficiency promotion and power input reduction. The outdoor fan speed can be adjusted by 25 steps.



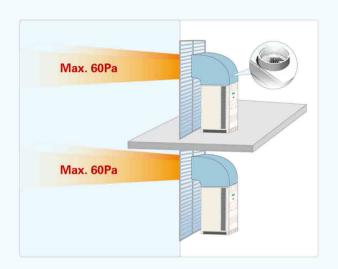
- •The stability of discharge pressure and suction pressure of compressor is assured
- •The stability of flow (capacity) dynamic allocation of indoor unit is assured
- Quick response of control system is improved, accordingly the system stability durability and reliability are assured



# 08 Wide Range of External Static Pressure of Outdoor Units

High efficient axial fan designed with computer fluid analysis, finite element method and aerodynamic simulation analysis owns optimized inlet and outlet angle, as well as a special flared outlet design, which results in higher external static pressure allowance, better air exhaust and sound air circulation.

- High Efficient Fan Reduces Motor Power Consumption
- Top Class External Static Pressure: 60Pa

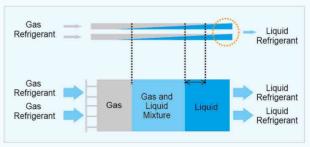


# **09 New Efficient Heat Exchanger**

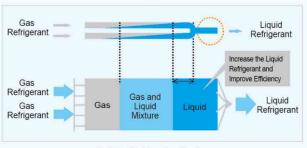
New efficient heat exchanger adopts  $\Phi$ 7.0 inner grooved copper pipes with high thermal conductivity and new Step Fin, which leads to air flow resistance reduction, even and full heat exchange and heat transfer improvement. Furthermore, the amount of frost on heat exchanger decreases in winter, which improves heating effect.

#### Optimized Refrigerant Circuit Design

The specially designed refrigerant flow circuit optimizes the efficiency of heat exchanger.



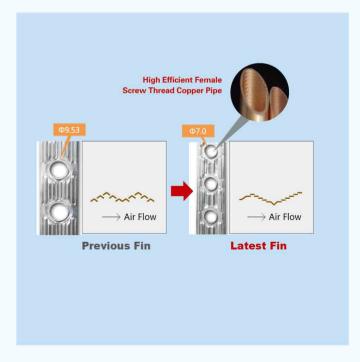
Conventional Refrigerating Circuit



Optimized Refrigerating Circuit

#### Newly Developed Fin with Efficient Heat Transfer

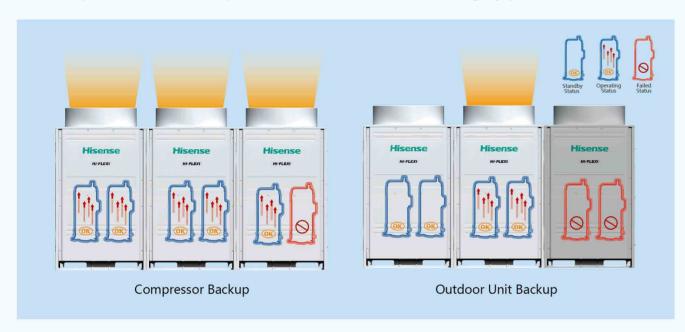
New fin and copper pipe contribute to promote heat transfer efficiency



# 10 Double Back-up Operation Function , Double Service Guarantee

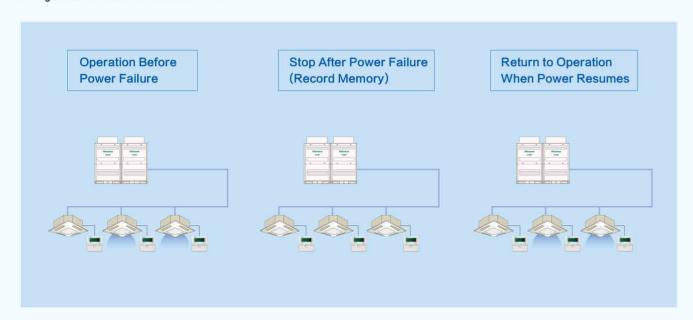
The back-up operation function that prevents the system from coming to a complete stop can be fulfilled in two ways.

- 1.As one of outdoor units breaks down, the rest of outdoor units in the same refrigerant system can turn to operate urgently (more than 16HP system practicable).
- 2.As one compressor is failed, the other compressor in the same outdoor unit can be set to emergency operation mode.



# 11 Automatic Reset Function

The operating data can be recorded automatically as power failure occurs. When the power supply is restored, the system can fulfill automatic start-up (manual operation allowed), the previous operation mode can be renewed without being reset, which brings more intelligent and considerate service to users.





# Flexible Design and Installation, Optimized Combination

Hi-Flexi fully takes actual installation conditions into consideration. Modular combination not only makes design and installation work more flexible, but also facilitates the transportation and decreases the land occupation. Adhere to the concept of "all for customers", Hisense incorporates utilization of space and air conditioning load effect into product design basing on Long refrigerating piping design, flexible match of indoor units and outdoor units and the ways of air supply.

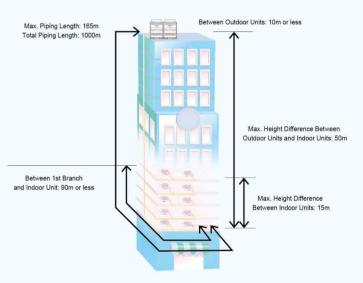
# 01 More Flexible Refrigerant Piping Work

Actual piping length: 165m

Height difference between the highest and lowest indoor units: 15m

Height difference between outdoor and indoor units: 50m (when outdoor units are higher than indoor units)

Height difference between outdoor and indoor units: 40m (when outdoor units are lower than indoor units)

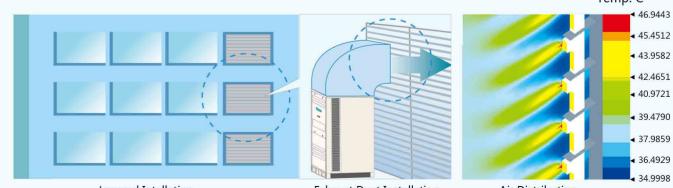


Long Piping Length

# **02 Layered Placement for High-Rise Building**

Outdoor fan motor can provide a higher external static pressure and a long distance air supply, which prevents air return from short-cut in an effective way, then ensures a sound ventilation and heat transfer. The installation of exhaust duct enables layered placement of outdoor units.

Temp.°C

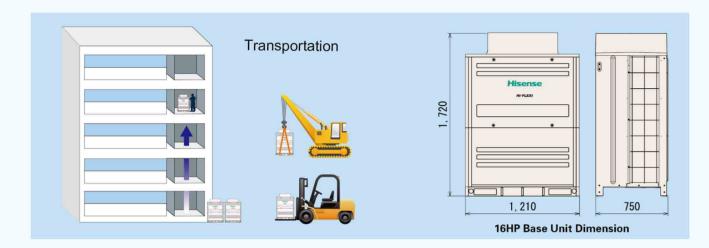


Layered Intallation Exhaust Duct Insta

Exhaust Duct Installation Air Distribution

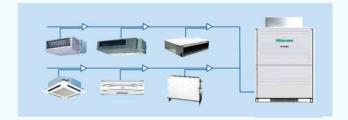
# 03 Compact and Lightweight design, Save Space

The elevator can be used to uplift the base unit (Max.16HP) separately. Easy and flexible transportation and installation are further enhanced by adopting the outdoor unit's lightweight and compact design.



# **04 Various Model Types Easily Match Different Spatial Layout**

Wide capacity range of outdoor units enables free model combination according to the actual situation of building. There are 7 types of indoor units for selection. Planner can choose appropriate type and capacity of indoor units according to interior decoration and functions.

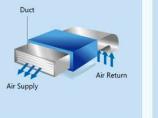


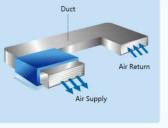
# 05 Flexible Ways of Air Supply and Air Return

Different duct types can be chosen to suit different construction structure and interior decoration, which meets various personalized requirement of customers.



Side Supply Ceiling Return







Side Supply Side Return

Side Supply Bottom Return

# Hi-FLEXI (M) Series

# **High Intelligent and Humanized Control System**

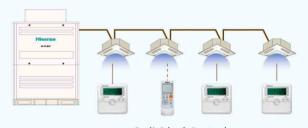
The development of technology makes people's life easier. Hisense inverter-driven central air conditioning creates a humanized system and realizes more convenient operation with intelligent central control system.

# **01 Various Controllers**

#### Remote Control Switch



- Cooling/Heating/Dry/Fan/Auto
- High/Medium/Low/Swing Louver
- · Set Temperature/ Timer
- Filter Clean
- Check
- Alarm Code Display
- Ventilation Increase



**Individual Control** 

#### Wireless Remote Control Switch

- Cooling/Heating/Dry/Fan/Auto
- High/Medium/Low
- Swing Louver
- Set Temperature
- Timer
- Filter Clean



#### Central Station

- Cooling/Heating/Dry/Fan/Auto
- High/Medium/Low
- Swing Louver
- Set Temperature
- Operation monitoring
- Wireless Controller Disable
- Alarm Code Display
- Max. 160 Indoor Units Control
- Indoor Unit Selection

#### 7-Day Timer

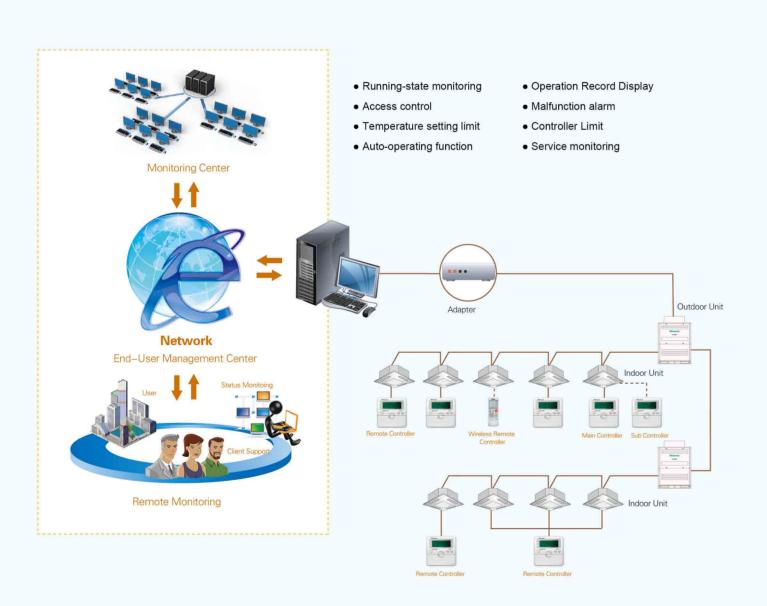
- Time Setting
- Holiday Setting
- . 3 time period setting on weekday
- Two Modes of Timetable



# **02 H-NET Management System**

H-NET air conditioning management system connects indoor units and computer through net adapter and BUS connection, which can monitor and control utmost 1024 outdoor units and 2560 indoor units and realize easy operation.

#### Main Function



# **03 Air-conditioning Electric Charge Allocation System**

Hisense electric charge allocation system consists of meter reading system and air conditioning management system. In accordance with the operation time and capacity output of indoor and outdoor units, the opening degree of EEV, the electric charge allocation software allocates the total power consumption to each indoor unit.

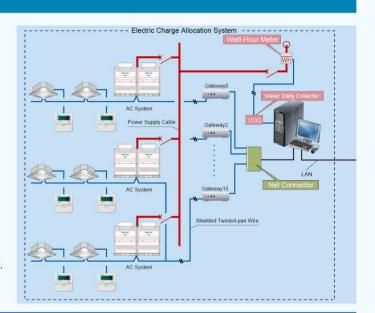
#### Main Features

- · Accurate and timely electricity calculation
- . User's electricity bill reading by the hour
- Electric charge allocation according to multi-rate of peak-vally period of time

All the indoor units and outdoor units connected with one adapter comprise one communication BUS system .

Max.64 outdoor units and 160 indoor units can be connected to a BUS system

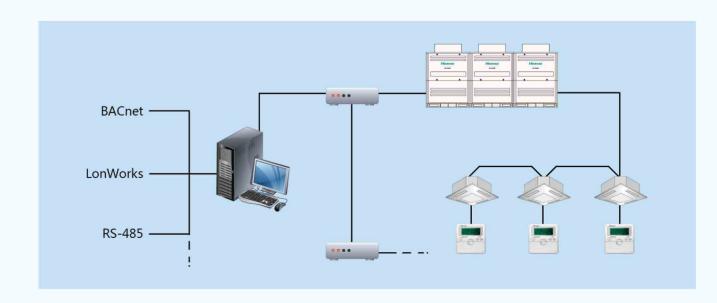
Max.16 adapters can be controlled by one computer
Max.2560 indoor units and 1024 outdoor units are under control



# **04 Building Management System**

Compatible to multiple communication protocol of Lonworks, BACnet, RS-485 etc. Connectible to BMS or Smart Home System.

- Real-time operation status monitoring for inquiry
- Operation order from monitoring center





# **Power Consumption**

	00113												
Item	Outdo	or Units		Historia		Historius and American State of the Control of the	se .		Historiae Historiae natus			Hisense Hisense water	
	HP		8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	24HP	26HP	28HP
		АС3Ф 380V/50Hz	AVWT-86U6SR	AVWT-96U6SR	AVWT-114U6SR	AVWT-136U6SS	AVWT-154U6SS	AVWT-182U6SZ	AVWT-190U6SZ	AVWT-210U6SZ	AVWT-232U6SZ	AVWT-250U6SZ	AVWT-272U6SZ
Mo Power	odel Supply	АС3Ф 415V/50Hz	AVWT-86UBSR	AVWT-96UBSR	AVWT-114UBSR	AVWT-136UBSS	AVWT-154UBSS	AVWT-182UBSZ	AVWT-190UBSZ	AVWT-210UBSZ	AVWT-232UBSZ	AVWT-250UBSZ	AVWT-272UBSZ
		АС1Ф 380V/60Hz	AVWT-86U7SR	AVWT-96U7SR	AVWT-114U7SR	AVWT-136U7SS	AVWT-154U7SS	AVWT-182U7SZ	AVWT-190U7SZ	AVWT-210U7SZ	AVWT-232U7SZ	AVWT-250U7SZ	AVWT-272U7SZ
(	Combination							AVWT-86U* + AVWT-96U*	AVWT-96U* + AVWT-96U*	AVWT-86U* + AVWT-136U*	AVWT-96U* + AVWT-136U*	AVWT-114U* + AVWT-136U*	AVWT-136U* + AVWT-136U*
	Н	mm	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Outer Dimension	W	mm	950	950	950	1210	1210	950+950	950+950	950+1210	950+1210	950+1210	1210+1210
Dimension i	D	mm	750	750	750	750	750	750	750	750	750	750	750
Net	Weight	kg	208	210	212	295	310	208+210	210+210	208+295	210+295	212+295	295+295
Cooling	Rated Capacity	kW	25.2	28.0	33.5	40.0	45.0	53.2	56.0	61.5	68.0	73.0	78.5
Operation	Power Consumption	kW	7.7	8.45	10.5	13.9	15.6	16.15	16.9	21.6	22.35	24.4	27.8
Heating	Rated Capacity	kW	27.0	31.5	37.5	45.0	50.0	58.5	63.0	69.0	76.5	81.5	87.5
Operation	Power Consumption	kW	7.5	8.4	10.2	13.2	14.8	15.9	16.8	20.7	21.6	23.4	26.4
	Gas Line	mm	Ф 19.05	Ф22.2	Ф25.4	Ф25.4	Ф28.6	Ф 28.6	Ф28.6	Ф28.6	Ф 28.6	Ф31.75	Ф31.75
Refrigerant	Liquid Line	mm	Ф9.53	Ф 9.53	Ф12.7	Ф12.7	Ф12.7	Ф15.88	Ф15.88	Ф 15.88	Ф 15.88	Ф19.05	Ф 19.05
Piping	Max.Connectable No of Indoor Units	台	8	10	12	16	16	18	20	24	26	28	28
	Max.piping Length	m	165	165	165	165	165	165	165	165	165	165	165
Hight	Between Outdoor and Indoor Units	m	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)
Difference	Between Indoor Units	m	15	15	15	15	15	15	15	15	15	15	15
No	oise	dB(A)	58	58	60	62	62	61	61	62	63	63	63
Operation	Cooling	°C DB	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43
Range	Heating	°C WB	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5

1.The nominal cooling capacity and heating capacity are based on following conditions:

Cooling Operation Conditions
Indoor Air Inlet Temperature: 20°C DB(80°F DB)
19.0°C WB (66.2°F WB)

Outdoor Air Inlet Temperature: 7°C DB(45°F DB)
6°C WB(43°F WB)

Outdoor Air Inlet Temperature: 20°C DB(45°F DB)
6°C WB(43°F WB)

Outdoor Air Inlet Temperature: 20°C DB(45°F DB)
6°C WB(43°F WB)

2. The sound pressure level is based on following conditions.1.5m beneath the unit.
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field. NOTES: 1.The nominal cooling capacity and heating capacity are based on following conditions:



# **Power Consumption**

LOWE	Const	ampuc	ווע									
Item	Outdoo	Units	Hisense	Hisense		Hisense Hisense noor		, , ,	Scorate Hisense Hisense	se .	Hisense Hise	Filterse
	HP		30HP	32HP	34HP	36HP	38HP	40HP	42HP	44HP	46HP	48HP
		АС3Ф 380V/50Hz	AVWT-290U6SZ	AVWT-307U6SZ	AVWT-328U6SZ	AVWT-345U6SZ	AVWT-365U6SZ	AVWT-386U6SZ	AVWT-402U6SZ	AVWT-426U6SZ	AVWT-444U6SZ	AVWT-460U6SZ
Mo Power		АС3Ф 415V/50Hz	AVWT-290UBSZ	AVWT-307UBSZ	AVWT-328UBSZ	AVWT-345UBSZ	AVWT-365UBSZ	AVWT-386UBSZ	AVWT-402UBSZ	AVWT-426UBSZ	AVWT-444UBSZ	AVWT-460UBSZ
		АС1Ф 380V/60Hz	AVWT-290U7SZ	AVWT-307U7SZ	AVWT-328U7SZ	AVWT-345U7SZ	AVWT-365U7SZ	AVWT-386U7SZ	AVWT-402U7SZ	AVWT-426U7SZ	AVWT-444U7SZ	AVWT-460U7SZ
	Combination		AVWT-136U* + AVWT-154U*	AVWT-154U* + AVWT-154U*	AVWT-86U* AVWT-96U* AVWT-154U*	AVWT-96U* AVWT-96U* AVWT-154U*	AVWT-114U* AVWT-114U* AVWT-136U*	AVWT-114U* AVWT-114U* AVWT-154U*	AVWT-114U* AVWT-136U* AVWT-154U*	AVWT-114U* AVWT-154U* AVWT-154U*	AVWT-136U* AVWT-154U* AVWT-154U*	AVWT-154U* AVWT-154U* AVWT-154U*
	Н	mm	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Outer Dimension	W	mm	1210+1210	1210+1210	950+950+1210	950+950+1210	950+950+1210	950+950+1210	950+1210+1210	950+1210+1210	1210+1210+1210	1210+1210+1210
-	D	mm	750	750	750	750	750	750	750	750	750	750
Net	Weight	kg	295+310	310+310	208+210+310	210+210+310	212+212+295	212+212+310	212+295+310	212+310+310	295+310+310	310+310+310
Cooling	Rated Capacity	kW	85.0	90.0	96.0	101.0	106.5	113.0	118.0	123.5	130.0	135.0
Operation	Power Consumption	kW	29.5	31.2	31.75	32.5	34.9	36.6	40.0	41.7	45.1	46.8
Heating	Rated Capacity	kW	95.0	100.0	108.0	113.0	119.0	126.5	131.5	137.5	145.0	150.0
Operation	Power Consumption	kW	28.0	29.6	30.7	31.6	33.6	35.2	38.2	39.8	42.8	44.4
	Gas Line	mm	Ф31.75	Ф31.75	Ф31.75	Ф38.1	Ф38.1	Ф38.1	Ф38.1	Ф38.1	Ф38.1	Ф38.1
Refrigerant	Liquid Line	mm	Ф19.05	Ф 19.05	Ф 19.05	Ф 19.05	Ф19.05	Ф 19.05	Ф 19.05	Ф19.05	Ф 19.05	Ф 19.05
Piping	Max.Connectable No. of Indoor Units	台	32	32	34	36	40	40	44	44	48	48
	Max.piping Length	m	165	165	165	165	165	165	165	165	165	165
Hight	Between Outdoor and Indoor Units	m	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)	50 (40)
Difference	Between Indoor Units	m	15	15	15	15	15	15	15	15	15	15
No	oise	dB(A)	63	63	64	64	64	64	64	64	65	65
Operation	Cooling	℃ DB	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43
Range	Heating	°C WB	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5	-20~15.5

1. The nominal cooling capacity and heating capacity are based on following conditions:

Cooling Operation Conditions
Indoor Air Inlet Temperature: 27°C DB(80°F DB)
19.0°C WB (66.2°F WB)

19.0°C WB (66.2°F WB)

Outdoor Air Inlet Temperature: 20°C DB(68°F DB)
6°C WB(43°F WB)

Outdoor Air Inlet Temperature: 35°C DB(95°F DB)
Piping Length: 7.5 Meters
Piping Lift: 0 Meter NOTES: 1.The nominal cooling capacity and heating capacity are based on following conditions:

Outdoor Air Inlet Temperature: 35°C DB(95°F DB)
Piping Length: 7.5 Meters Piping Lift: 0 Meter

2. The sound pressure level is based on following conditions.1.5m beneath the unit.
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.



# **Indoor Units Lineup**

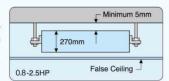
#### **Indoor Units**

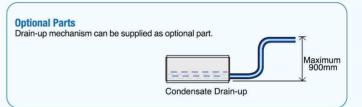
Type	Model	HP	0.8	1.0	1.3	1.5	1.8	2.0	2.3	2.5	3.0	3.3	4.0	5.0	6.0	8.0	10
туре	Model	kBtu/h	7	9	12	14	17	18	22	24	27	30	38	48	56	70	90
In-the- ceiling(Low Static Pressure)		is a	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
In-the- ceiling(High Static Pressure)			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Low-Height In-the- ceiling	-	D	•	•	•	•	•	•	•	•							
Slim In-the-Ceiling			•	•	•	•											
4-Way Cassette				•	•	•	•	•	•	•	•	•	•	•	•		
Wall	Sant I			•		•		•	•								
Floor Concealed		ţ		•		•		•		•							

# **In-the-ceiling Type** (Low Static Pressure)



Less than 270mm in height can be easily fit into the limited space in the false ceiling (0.8HP-2.5HP) .

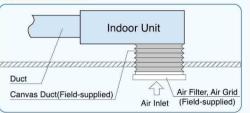




#### Fresh Indoor Air

By introducing fresh outdoor air and being equipped with air filter to keep indoor air clean.

#### Flexibly supports a wide range of installation conditions at site



NOTE: When bottom air inlet is adopted, sound pressure will increase according to factors such as installation mode and the room structure.

#### **Excellent Air Flow**

Cooling/heating air is distributed from the unit to indoor space through ducts, which creates a comfortable environment.

Indoor Unit							In-the-ceilir	ng Type (Lov	v Static Pres	ssure)						
Model Power Supply	AC10 220V/50Hz AC10 240V/50Hz AC10 220V/60Hz	AVD-07 UXCSAL AVD-07 UXDSAL AVD-07 UX2SAL	AVD-09 UXCSAL AVD-09 UXDSAL AVD-09 UX2SAL	AVD-12 UXCSAL AVD-12 UXDSAL AVD-12 UX2SAL	AVD-14 UXCSAL AVD-14 UXDSAL AVD-14 UX2SAL	AVD-17 UXCSBL AVD-17 UXDSBL AVD-17 UX2SBL	AVD-18 UXCSBL AVD-18 UXDSBL AVD-18 UX2SBL	AVD-22 UXCSBL AVD-22 UXDSBL AVD-22 UX2SBL	AVD-24 UXCSBL AVD-24 UXDSBL AVD-24 UX2SBL	AVD-27 UXCSCL AVD-27 UXDSCL AVD-27 UX2SCL	AVD-30 UXCSCL AVD-30 UXDSCL AVD-30 UX2SCL	AVD-38 UXCSCL AVD-38 UXDSCL AVD-38 UX2SCL	AVD-48 UXCSDL AVD-48 UXDSDL AVD-48 UX2SDL	AVD-54 UXCSDL AVD-54 UXDSDL AVD-54 UX2SDL	AVD-76 UX6SEL*1) AVD-76 UXBSEL*2) AVD-76 UX7SEL*3)	AVD-96 UX6SFL*1) AVD-96 UXBSFL*2) AVD-96 UX7SFL*3)
	kW	2.2	2.8	3.6	4.3	5.0	5.6	6.3	7.1	8.4	9.0	11.2	14.2	16.0	22.4	28.0
Nominal Cooling Capacity	kcal/h	1,900	2,400	3,100	3,700	4,300	4,800	5,400	6,100	7,200	7,700	9,600	12,200	13,800	19,300	24,100
	Btu/h	7,500	9,600	12,300	14,700	17,100	19,100	21,500	24,200	28,700	30,700	38,200	48,500	54,600	76,500	95,600
	kW	2.8	3.3	4.2	4.9	5.6	6.5	7.5	8.5	9.6	10.0	13.0	16.3	18.0	25.0	31.5
Nominal Heating Capacity	kcal/h	2,400	2,800	3,600	4,200	4,800	5,600	6,500	7,300	8,300	8,600	11,200	14,000	15,500	21,500	27,100
	Btu/h	9,600	11,300	14,300	16,700	19,100	22,200	25,600	29,000	32,800	34,100	44,400	55,600	61,400	85,300	107,500
Sound Pressure Level (High/Medium/Low)	dB(A)	31-27-26	31-27-26	32-30-28	32-30-28	33-31-29	33-31-29	34-32-30	34-32-30	40.5-38-35	40.5-38-35	41-39-37	42-39-37	45-41-39	50	52
Outer Dimensions (H x W x D)	mm		270× (650	)+75) ×720			270× (900-	+75) ×720		350×	(900+75)	×800	350× (1300	0+75) ×800	470×1060×1120	470×1250×1120
Net Weight	kg	25	25	25	25	34	34	34	34	44	44	44	56	56	94	106
Refrigerant						R4	10A(Nitroge	n-charged fo	or Corrosion-	resistance)						
Indoor Fan Air Flow Rate (High/Medium/Low)	m³/min	8/7/6	8/7/6	13/11/9	13/11/9	15/13/11	15/13/11	16/14/12	16/14/12	25/21/17	25/21/17	27/23/19	37/31/25	38/35/29	58	72
Motor Power	W	100	100	140	140	140	140	140	180	290	290	290	410	410	900	1070
Connections Refrigeran	t Piping						Flare-nut	Connection(	with Flare N	uts)						
Liquid Line	mm	Φ6.35	Ф6.35	Ф6.35	Ф6.35	Ф6.35	Ф6.35	Ф9.53	Φ9.53	Ф9.53						
Gas Line	mm	Φ12.7	Ф12.7	Ф12.7	Ф12.7	Ф15.88	Ф19.05	Ф22.2								
Condensate Drain							VP25(	Outer Diame	eter Ф32)							
External Static Pressure	Pa	30	30	30	30	30	30	30	30	60	60	60	60	60	100	100
Approximate Packing Measurement	m <sup>3</sup>	0.21	0.21	0.21	0.21	0.27	0.27	0.27	0.27	0.38	0.38	0.38	0.52	0.52	0.90	1.06

1. The nominal cooling capacity and heating capacity are based on following conditions: Cooling Operation Conditions **Heating Operation Conditions** 

Indoor Air Inlet Temperature:27°C DB(80°F DB) 19.0°C WB (66.2°F WB)

Outdoor Air Inlet Temperature: 35°C DB(95°F DB)

Piping Length: 7.5 Meters Piping Lift: 0 Meter 3. \*1: AC3Φ, 380V/50Hz, \*2: AC3Φ, 415V/50Hz, \*3: AC3Φ, 380V/60Hz

Indoor Air Inlet Temperature: 20°C DB(68°F DB) Outdoor Air Inlet Temperature: 7°C DB(45°F DB) 6°C WB(43°F WB)

2. The sound pressure level is based on following conditions.1.5m beneath the unit. The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

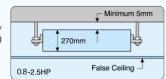


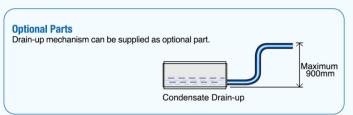
# In-the-ceiling Type (High Static Pressure)



#### **Installation Space-saving**

Less than 270mm in height can be easily fit into the limited space in the false ceiling (0.8HP–2.5HP).

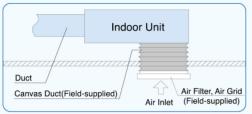




#### **Fresh Indoor Air**

By introducing fresh outdoor air and being equipped with air filter to keep indoor air clean.

# Flexibly supports a wide range of installation conditions at site



NOTE:

When bottom air inlet is adopted, sound pressure will increase. according to factors such as installation mode and the room structure.

#### **Excellent Air Flow**

Cooling/heating air is distributed from the unit to indoor space through ducts, which creates a comfortable environment.

Indoor Unit						In-th	e-ceiling Ty	/pe(High St	atic Pressu	re)						
Model	АС1Ф 220V/50Hz		AVD-09 UXCSAH	AVD-12 UXCSAH	AVD-14 UXCSAH	AVD-17 UXCSBH	AVD-18 UXCSBH	AVD-22 UXCSBH	AVD-24 UXCSBH	AVD-27 UXCSCH	AVD-30 UXCSCH	AVD-38 UXCSCH	AVD-48 UXCSDH	AVD-54 UXCSDH		AVD-96 UX6SFH*1)
Power Supply	AC1Φ 240V/50Hz	AVD-07 UXDSAH	AVD-09 UXDSAH	AVD-12 UXDSAH	AVD-14 UXDSAH	AVD-17 UXDSBH	AVD-18 UXDSBH	AVD-22 UXDSBH	AVD-24 UXDSBH	AVD-27 UXDSCH	AVD-30 UXDSCH	AVD-38 UXDSCH	AVD-48 UXDSDH	AVD-54 UXDSDH	AVD-76 UXBSEH*3)	AVD-96 UXBSFH*3)
r oner ouppry	АС1Ф 220V/60Hz	AVD-07 UX2SAH	AVD-09 UX2SAH	AVD-12 UX2SAH	AVD-14 UX2SAH	AVD-17 UX2SBH	AVD-18 UX2SBH	AVD-22 UX2SBH	AVD-24 UX2SBH	AVD-27 UX2SCH	AVD-30 UX2SCH	AVD-38 UX2SCH	AVD-48 UX2SDH	AVD-54 UX2SDH	AVD-76 UX7SEH*2)	AVD-96 UX7SFH*2)
	kW	2.2	2.8	3.6	4.3	5.0	5.6	6.3	7.1	8.4	9.0	11.2	14.2	16.0	22.4	28.0
Nominal Cooling Capacity	kcal/h	1,900	2,400	3,100	3,700	4,300	4,800	5,400	6,100	7,200	7,700	9,600	12,200	13,800	19,300	24,100
gy	Btu/h	7,500	9,600	12,300	14,700	17,100	19,100	21,500	24,200	28,700	30,700	38,200	48,500	54,600	76,500	95,600
Nominal	kW	2.8	3.3	4.2	4.9	5.6	6.5	7.5	8.5	9.6	10.0	13.0	16.3	18.0	25.0	31.5
Heating Capacity	kcal/h	2,400	2,800	3,600	4,200	4,800	5,600	6,500	7,300	8,300	8,600	11,200	14,000	15,500	21,500	27,100
ricuting capacity	Btu/h	9,600	11,300	14,300	16,700	19,100	22,200	25,600	29,000	32,800	34,100	44,400	55,600	61,400	85,300	107,500
Sound Pressure Level (High/Medium/Low)	dB(A)	34-32-30	34-32-30	35-33-31	35-33-31	36-34-32	36-34-32	38-36-34	38-36-34	42-39-35	42-39-35	43-40-36	44-42-37	47-43-39	52	54
Outer Dimensions (H x W x D)	mm		270×(650-	+75) ×720			270×(900	)+75)×720		350	×(900+75)×	800	350×(1300	+75)×800	470×1060×1120	470×1250×1120
Net Weight	kg	25	25	25	25	34	34	34	34	44	44	44	56	56	94	106
Refrigerant							R4	10A(Nitroge	n-charged f	or Corrosion	n-resistance	)				
Indoor Fan Air Flow Rate (High/Medium/Low)	m³/min	8/7/6	8/7/6	13/11/9	13/11/9	15/13/11	15/13/11	16/14/12	16/14/12	25/21/17	25/21/17	27/23/19	37/31/25	38/35/29	58	72
Motor Power	W	100	100	140	140	140	140	140	180	290	290	290	410	410	1030	1280
Connections Refrigerant F	Piping						Flare-n	ut Connecti	on(with Flar	e Nuts)						
Liquid Line	mm	Φ6.35	Ф6.35	Ф6.35	Ф6.35	Φ6.35	Ф6.35	Ф9.53	Ф9.53	Ф9.53	Φ9.53	Ф9.53	Ф9.53	Ф9.53	Ф9.53	Ф9.53
Gas Line	mm	Ф12.7	Ф12.7	Ф12.7	Ф12.7	Ф15.88	Ф19.05	Ф22.2								
Condensate Drain								VP25(O	uter Diamet	er Ф32)						
External Static Pressure	Pa	50(80)	50(80)	50(80)	50(80)	50(80)	50(80)	50(80)	50(80)	120(90)	120(90)	120(90)	120(90)	120(90)	220	220
Approximate Packing	m <sup>3</sup>	0.21	0.21	0.21	0.21	0.27	0.27	0.27	0.27	0.38	0.38	0.38	0.52	0.52	0.90	1.06

#### NOTES:

 ${\bf 1.} \\ {\bf The \ nominal \ cooling \ capacity \ and \ heating \ capacity \ are \ based \ on \ following \ conditions:}$ 

Cooling Operation Conditions Indoor Air Inlet Temperature:27°C DB(80°F DB)

19.0°C WB (66.2°F WB)

Outdoor Air Inlet Temperature: 35°C DB(95°F DB)

Piping Length: 7.5 Meters Piping Lift: 0 Meter

3. \*1: AC3Ф, 380V/50Hz, \*2: AC3Ф, 415V/50Hz, \*3: AC3Ф, 380V/60Hz

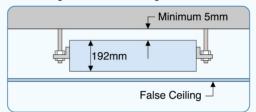
Heating Operation Conditions
Indoor Air Inlet Temperature: 20°C DB(68°F DB)
Outdoor Air Inlet Temperature: 7°C DB(45°F DB)
6°C WB(43°F WB)

The sound pressure level is based on following conditions.1.5m beneath the unit.
 The above data was measured in an anechoic chamber so that reflected sound should be taken

# Low-height In-the-ceiling Type

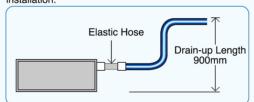
#### **Installation Space-saving**

With a height of 192mm may be easily installed inside the low height residential ceiling.



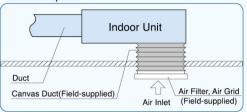
#### **Drain-up Mechanism as Standard Part**

Drain-up length achieves 900mm which enables convenient drain piping and enlarges the flexibility of installation.



#### **Satisfy Varied Requests on Installation**

Available air inlet as rear or bottom entry, consumers can choose relevant air inlet mode according to the practical installation space.



(Installation Diagram of Air Bottom Inlet)

#### **Broad Range of External Static Pressure**

10Pa(or30Pa), flexibly supports a wide range of installation conditions at site, e.g. longer ducts and shorter ducts supplied.

Indoor Unit					Low-height In-t	ho poiling Typo			
Indoor Onit					Low-neight in-t	ne-ceiling rype			
Model	АС1Ф 220V/50Hz	AVE-07 UXCSAL	AVE-09 UXCSAL	AVE-12 UXCSAL	AVE-14 UXCSAL	AVE-17 UXCSBL	AVE-18 UXCSBL	AVE-22 UXCSBL	AVE-24 UXCSBL
Power Supply	АС1Ф 240V/50Hz	AVE-07 UXDSAL	AVE-09 UXDSAL	AVE-12 UXDSAL	AVE-14 UXDSAL	AVE-17 UXDSBL	AVE-18 UXDSBL	AVE-22 UXDSBL	AVE-24 UXDSBL
	АС1Ф 220V/60Hz	AVE-07 UX2SAL	AVE-09 UX2SAL	AVE-12 UX2SAL	AVE-14 UX2SAL	AVE-17 UX2SBL	AVE-18 UX2SBL	AVE-22 UX2SBL	AVE-24 UX2SBL
Nominal	kW	2.2	2.8	3.6	4.3	5.0	5.6	6.3	7.1
Cooling Capacity	kcal/h	1,900	2,400	3,100	3,700	4,300	4,800	5,400	6,100
	Btu/h	7,500	9,600	12,300	14,700	17,100	19,100	21,500	24,200
Nominal	kW	2.8	3.3	4.2	4.9	5.6	6.5	7.5	8.5
Heating Capacity	kcal/h	2,400	2,800	3,600	4,200	4,800	5,600	6,500	7,300
· ····································	Btu/h	9,600	11,300	14,300	16,700	19,100	22,200	25,600	29,000
Sound Pressure Level (High/Medium/Low)	dB(A)	28-25-22	28-25-22	32-30-27	32-30-27	35-31-29	35-31-29	36-34-31	36-34-31
Outer Dimensions (H x W x D)	mm	192×900×447	192×900×447	192×900×447	192×900×447	192×1170×447	192×1170×447	192×1170×447	192×1170×447
Net Weight	kg	20	20	21	21	26	26	26	26
Refrigerant				R410A(	Nitrogen-charged	for Corrosion-resis	tance)		
Indoor Fan Air Flow Rate (High/Medium/Low)	m³/min	8/7/6	8/7/6	10/8/7	10/8/7	14.5/12.5/10.5	14.5/12.5/10.5	16/14/12	16/14/12
Motor Power	W	50	50	70	70	90	90	100	100
Connections Refrigerant Piping				F	lare-nut Connecti	on(with Flare Nuts)			
Liquid Line	mm	Ф6.35	Ф6.35	Ф6.35	Ф6.35	Ф6.35	Ф6.35	Ф9.53	Ф9.53
Gas Line	mm	Ф12.7	Ф12.7	Ф12.7	Ф12.7	Ф15.88	Ф15.88	Ф15.88	Ф15.88
Condensate Drain					VP25(Outer D	iameter Φ32 )			
External Static Pressure	Pa	10(30)	10(30)	10(30)	10(30)	10(30)	10(30)	10(30)	10(30)
Approximate Packing Measurement	m <sup>3</sup>	0.15	0.15	0.15	0.15	0.18	0.18	0.18	0.18

#### NOTES:

1. The nominal cooling capacity and heating capacity are based on following conditions:

Cooling Operation Conditions
Indoor Air Inlet Temperature:27°C DB(80°F DB)

ndoor Air Inlet Temperature:27°C DB(80°F DB) 19.0°C WB (66.2°F WB)

Outdoor Air Inlet Temperature: 35°C DB(95°F DB)

Piping Length: 7.5 Meters Piping Lift: 0 Meter

Heating Operation Conditions
Indoor Air Inlet Temperature: 20°C DB(68°F DB)
Outdoor Air Inlet Temperature: 7°C DB(45°F DB)

The sound pressure level is based on following conditions.1.5m beneath the unit.
 The above data was measured in an anechoic chamber so that reflected sound should be taken in the field of the

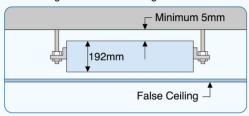
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# **Slim In-the-Ceiling Type**

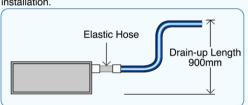
#### **Installation Space-saving**

With a height of 192mm may be easily installed inside the low height residential ceiling.



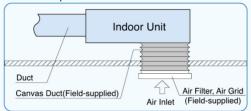
#### **Drain-up Mechanism as Standard Part**

Drain-up length achieves 900mm which enables convenient drain piping and enlarges the flexibility of installation



#### **Satisfy Varied Requests on Installation**

Available air inlet as rear or bottom entry, consumers can choose relevant air inlet mode according to the practical installation space.



(Installation Diagram of Air Bottom Inlet)

#### **Broad Range of External Static Pressure**

10Pa(or30Pa), flexibly supports a wide range of installation conditions at site, e.g. longer ducts and shorter ducts supplied.

Indoor Unit			Slim In-the	-Ceiling	
Model Power Supply	АС1Ф 220V/50Hz	AVE-07UXCSGL	AVE-09UXCSGL	AVE-12UXCSGL	AVE-14UXCSGL
Nominal	kW	2.2	2.8	3.6	4.3
Cooling Capacity	kcal/h	1,900	2,400	3,100	3,700
coming containing	Btu/h	7,500	9,600	12,300	14,700
Nominal	kW	2.8	3.3	4.2	4.9
Heating Capacity	kcal/h	2,400	2,800	3,600	4,200
roaming capacity	Btu/h	9,600	11,300	14,300	16,700
Sound Pressure Level (High/Medium/Low)	dB(A)	28-25-22	28-25-22	32-30-28	32-30-28
Outer Dimensions (H x W x D)	mm	192×700×602	192×700×602	192×700×602	192×700×602
Net Weight	kg	21	21	21	21
Refrigerant			R410A(Nitrogen-charged	for Corrosion-resistance)	
Indoor Fan Air Flow Rate (High/Medium/Low)	m³/min	8/7/6	8/7/6	10/8/7	10/8/7
Motor Power	W	50	50	60	60
Connections Refrigerant Piping			Flare-nut Connection	on(with Flare Nuts)	
Liquid Line	mm	Ф6.35	Ф6.35	Ф6.35	Φ6.35
Gas Line	mm	Ф12.7	Ф12.7	Ф12.7	Ф12.7
Condensate Drain			VP25(Outer D	iameter Φ32 )	
External Static Pressure	Pa	10(30)	10(30)	10(30)	10(30)
Approximate Packing Measurement	m³	0.15	0.15	0.15	0.15

#### NOTES:

 ${\bf 1.} \\ The nominal cooling capacity and heating capacity are based on following conditions:$ 

Cooling Operation Conditions Indoor Air Inlet Temperature:27°C DB(80°F DB)

19.0°C WB (66.2°F WB)

Outdoor Air Inlet Temperature: 35°C DB(95°F DB)

Piping Length: 7.5 Meters Piping Lift: 0 Meter

Heating Operation Conditions
Indoor Air Inlet Temperature: 20°C DB(68°F DB)
Outdoor Air Inlet Temperature: 7°C DB(45°F DB)
6°C WB(43°F WB)

 The sound pressure level is based on following conditions. 1.5m beneath the unit.
 The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

# **4-Way Cassette Type**



#### **Extremely Quiet Operation**

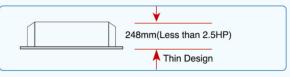
By employing a super-high-stream turbo fan (Three-dimensional twisted wing large bore and high efficiency), the wind flow efficiency has been improved. with the under damping slit mounted near the center of the revolving shaft, the abnormal noise which is unique to DC motors caused by the number of magnetic poles and revolution speed of the motor, is reduced.

#### **Unified Panel Sizes**

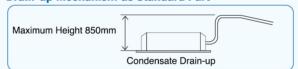
Panel sizes are unified to a 950mm square, neat and elegance, and well harmonized with decoration.

#### **Compact and Thin**

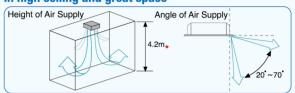
The height of the unit is just 248mm(Less than 2.5HP), so it can be installed in a small space inside a ceiling.



#### **Drain-up Mechanism as Standard Part**



# With broad range of air supply, is suitable to be used in high ceiling and great space



\* When indoor unit model is RCI-3.0~6.0FSN1Q. When indoor unit model is RCI-1.0~2.5FSN1Q, the value is 3.5m.

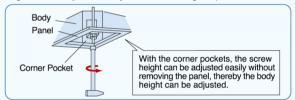
#### Input power reduced by applying of new developed DC

### fan motor.

Employed several new technologies such as a ferritic magnetic surfacemounted rotor, centralized winding system and split core system, the motor efficiency is improved in all aspects, smaller and lighter.

#### Body height easily adjustable in the corner pockets

A pocket is provided for each of the four panel corners, so that the body height can be adjusted easily without removing the panel.



Indoor Unit							4-Way C	assette Type					
Model	AC1Ф 220V/50Hz	AVC-09 UXCSEB	AVC-12 UXCSEB	AVC-14 UXCSEB	AVC-17 UXCSEB	AVC-18 UXCSEB	AVC-22 UXCSEB	AVC-24 UXCSEB	AVC-27 UXCSFB	AVC-30 UXCSFB	AVC-38 UXCSFB	AVC-48 UXCSFB	AVC-54 UXCSFB
Power Supply	AC1Ф 240V/50Hz	AVC-09 UXDSEB	AVC-12 UXDSEB	AVC-14 UXDSEB	AVC-17 UXDSEB	AVC-18 UXDSEB	AVC-22 UXDSEB	AVC-24 UXDSEB	AVC-27 UXDSFB	AVC-30 UXDSFB	AVC-38 UXDSFB	AVC-48 UXDSFB	AVC-54 UXDSFB
	AC1Ф 220V/60Hz	AVC-09 UX2SEB	AVC-12 UX2SEB	AVC-14 UX2SEB	AVC-17 UX2SEB	AVC-18 UX2SEB	AVC-22 UX2SEB	AVC-24 UX2SEB	AVC-27 UX2SFB	AVC-30 UX2SFB	AVC-38 UX2SFB	AVC-48 UX2SFB	AVC-54 UX2SFB
Manadarat	kW	2.8	3.6	4.3	5.0	5.6	6.3	7.1	8.4	9.0	11.2	14.2	16.0
Nominal	kcal/h	2.400	3.100	3.700	4.300	4.800	5.400	6.100	7.200	7.700	9.600	12.200	13.800
Heating Capacity	Btu/h	9,600	12,300	14.700	17.100	19.100	21,500	24.200	28.700	30.700	38,200	48,500	54,600
	kW	3.3	4.2	4.9	5.6	6.5	7.5	8.5	9.6	10.0	13.0	16.3	18.0
Nominal	kcal/h	2.800	3,600	4.200	4.800	5,600	6.500	7.300	8,300	8,600	11,200	14.000	15.500
Heating Capacity	Btu/h	11,300	14,300	16,700	19,100	22,200	25,600	29,000	32,800	34,100	44,400	55,600	61,400
Sound Pressure Level (High/Medium/Low)	dB(A)	30-29-27	31-29-27	31-29-27	32-30-27	32-30-27	33-31-29	33-31-29	36-34-32	36-34-32	41-38-35	44-39-36	44-42-38
Outer Dimensions (H x W x D)	mm				248 x 840 x	840					298 x 840 x	840	
Net Weight	kg	22	22	22	23	23	23	23	24	24	27	27	27
Refrigerant					F	R410A(Nitrog	en-charged fo	or Corrosion-	resistance)				
Indoor Fan Air Flow Rate (High/Medium/Low)	m³/min	13/12/11	15/13.5/12	15/13.5/12	16/14/12	16/14/12	19/17/14	20/17/15	26/23/20	26/23/20	32/28/24	34/29/25	37/32/27
Motor Power	W	40	50	50	50	50	60	60	90	90	110	140	150
Connections Refrigerant Piping						Flare-	nut Connection	on(with Flare	Nuts)				
Liquid Line	mm	Ф6.35	Ф6.35	Ф6.35	Ф6.35	Ф6.35	Ф9.53						
Gas Line	mm	Ф12.7	Ф12.7	Ф12.7	Ф15.88								
Condensate Drain						V	P25(Outer Di	ameter Φ32					
Approximate Packing Measurement	m³	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.26	0.26	0.26	0.26	0.26
Standard Accessories							Suspension	n Brackets					
Panel Model							PH-	A-NA					
Cabinet Color							Neutra	l White					
Outer Dimensions (H x W x D)	mm						37 x95	0 x 950					
Net Weight	kg	6	6	6	6	6	6	6	6	6	6	6	6
Approximate Packing Measurement	m³	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08

#### NOTES:

1. The nominal cooling capacity and heating capacity are based on following conditions:

Indoor Air Inlet Temperature:27°C DB(80°F DB)

Cooling Operation Conditions

19.0°C WB (66.2°F WB)

Outdoor Air Inlet Temperature: 35°C DB(95°F DB)

Piping Length: 7.5 Meters Piping Lift: 0 Meter

Heating Operation Conditions
Indoor Air Inlet Temperature: 20°C DB(68°F DB)
Outdoor Air Inlet Temperature: 7°C DB(45°F DB)

6°C WB(43°F WB)

The sound pressure level is based on following conditions.1.5m beneath the unit.
 The above data was measured in an anechoic.

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.



# **Wall Type**



#### Elegant design, harmonizing with any type of interior design

The quality of "elegance" is additionally provided to meet contemporary needs. Features a simple, smooth form that harmonizes with any interior style.

#### **Anti-mold filter**

Anti-mold filter is equipped as standard accessory.

#### Compact and light weight, allowing easy installation

Designed with ease of installation in mind, this new model adopts a slim design and uses a high proportion of lightweight resin parts. Unit weight has been vastly reduced.

#### Uses the new "Wonder Flap"

Uses the "Wonder Flap" in its air outlet. The flap, provided with three flow guides each at its right and left sides, helps disperse the air flow. this wodening effect allows the air to be comfortably circulated throughout the room.



Indoor Unit			Wa	II Type	
Model	AC1Φ 220V/50Hz	AVS-09URCSRAA	AVS-14URCSRAA	AVS-18URCSRAA	AVS-22UXCSRAA
Power Supply	AC1Φ 240V/50Hz	AVS-09URDSRAA	AVS-14URDSRAA	AVS-18URDSRAA	AVS-22UXDSRAA
Nominal	kW	2.8	4.0	5.6	6.3
Cooling Capacity	kcal/h	2,400	3,400	4,800	5,400
	Btu/h	9,600	13,700	19,100	21,500
Nominal	kW	3.2	4.8	6.3	7.5
Heating Capacity	kcal/h	2,800	4,100	5,400	6,500
	Btu/h	10,900	16,400	21,500	25,600
ound Pressure Level (High/Medium/Low)	dB(A)	38-35-32	42-38-35	43-39-36	44-40-38
Cabinet Color			Silky	White	
Outer Dimensions(H x W x D)	mm		305 x	870 x 225	
Net Weight	kg	9	16	22	24
Refrigerant			R410A(Nitrogen-charged	d for Corrosion-resistance)	
ndoor Fan Air Flow Rate (Cooling/Heating)	m³/min	6.9/6.5/6.1	10.5/10.1/9.6	12.8/12.2/11.6	13.3/12.8/12.1
Motor Power	W	30	40	50	50
Connections Refrigerant Piping			Flare-nut Connec	tion(with Flare Nuts)	
Liquid Line	mm	Φ6.35	Ф6,35	Ф6.35	Ф6.35
Gas Line	mm	Ф12.7	Ф12.7	Ф15.88	Ф15.88
Condensate Drain		VP16	VP16	VP16	VP16
Approximate Packing Measurement	m <sup>3</sup>	0.11	0.11	0.11	0.11
Standard Accessories			Wall Mounti	ng Bracket	

#### NOTES:

1. The nominal cooling capacity and heating capacity are based on following conditions: Cooling Operation Conditions

Indoor Air Inlet Temperature:27°C DB(80°F DB) 19.0°C WB (66.2°F WB)

Outdoor Air Inlet Temperature: 35°C DB(95°F DB) Piping Length: 7.5 Meters Piping Lift: 0 Meter

**Heating Operation Conditions** Indoor Air Inlet Temperature: 20°C DB(68°F DB) Outdoor Air Inlet Temperature: 7°C DB(45°F DB) 6°C WB(43°F WB)

2. The sound pressure level is based on following conditions.1.5m beneath the unit. The above data was measured in an anechoic chamber so that reflected sound should be taken

# **Floor Concealed Type**

#### Compact design for limited space inside of perimeter wall

#### So compact that it fits into even a tiny space

Special emphasis placed on interior design compatibility as well as space saving design, allowing it to fit perfectly into the space below a bay window.





Indoor Unit			Floor Conceale	ed Type	
Model	AC1Φ 220V/50Hz	AVH-09UXCSAA	AVH-14UXCSAA	AVH-18UXCSBA	AVH-24UXCSBA
Power Supply	AC1Φ 240V/50Hz	AVH-09UXDSAA	AVH-14UXDSAA	AVH-18UXDSBA	AVH-24UXDSBA
	AC1Φ 220V/60Hz	AVH-09UX2SAA	AVH-14UX2SAA	AVH-18UX2SBA	AVH-24UX2SBA
Nominal	kW	2.8	4.3	5.6	7.1
Cooling Capacity	kcal/h	2,400	3,700	4,800	6,100
	Btu/h	9,600	14,700	19,100	24,200
	kW	3.3	4.9	6.5	8.5
Nominal Heating Capacity	kcal/h	2,800	4,200	5,600	7,300
. Iodaing Supusity	Btu/h	11,300	16,700	22,200	29,000
Sound Pressure Level(High/Medium/Low)	dB(A)	36-33-30	39-36-32	40-37-33	43-39-35
Cabinet Color			Silky Wh	iite	
Outer Dimensions(H x W x D)	mm	620 x 90	00 x 202	620 x 1	170 x 202
Net Weight	kg	18	22	26	27
Refrigerant			R410A(Nitrogen-charged	for Corrosion-resistance)	
ndoor Fan Air Flow Rate(High/Medium/Low)	m³/min	8/7/6	10/8/7	14.5/12.5/10.5	16/14/12
Motor Power	W	50	80	90	110
Connections Refrigerant Piping			Flare-nut Connection	on(with Flare Nuts)	
Liquid Line	mm	Ф6.35	Ф6.35	Ф6.35	Ф9.53
Gas Line	mm	Ф12.7	Ф12.7	Ф15.88	Ф15.88
Condensate Drain		VP25	VP25	VP25	VP25
Approximate Packing Measurement	m <sup>3</sup>	0.19	0.19	0.23	0.23

#### NOTES:

1. The nominal cooling capacity and heating capacity are based on following conditions: Cooling Operation Conditions

Indoor Air Inlet Temperature:27°C DB(80°F DB) 19.0°C WB (66.2°F WB)

Outdoor Air Inlet Temperature: 35°C DB(95°F DB)

Piping Length: 7.5 Meters Piping Lift: 0 Meter

Heating Operation Conditions Indoor Air Inlet Temperature: 20°C DB(68°F DB) Outdoor Air Inlet Temperature: 7°C DB(45°F DB)

2. The sound pressure level is based on following conditions.1.5m beneath the unit. The above data was measured in an anechoic chamber so that reflected sound should be taken



#### **All Fresh Air Indoor Unit**

#### Create comfortable and healthy indoor environment

Create a comfortable and healthy indoor environment by introducing fresh outdoor air. By heating or cooling fresh outdoor air to almost the same temperature as room temperature, fresh ambient air can be adapted and then introduced into indoor room. Besides, after filtered, fresh outdoor air in transition seasons can be drawn to indoor room directly with no need of heating or cooling operation. While fresh outdoor air is introduced, other indoor units don't bear fresh air load.

#### **Advanced control**

Can be interfaced to H-NET system. easy electrical wiring design and installation.

#### Flexible line-up to Hi-Flexi series

All fresh air indoor unit is applicable to Hi-Flexi M Series outdoor units. both Hi-Flexi M Series indoor units and all fresh air indoor unit can be used in Hi-Flexi M Series system.

#### Higher external static pressure

Better installation flexibility at site, longer duct can be connected.

#### **General Data for All Fresh Air Indoor Unit**

Model			AVA-38 UXCSQH-108	AVA-38 UXDSQH-108	AVA-76 UXCSRH-168	AVA-76 UXDSRH-168	AVA-76 UX2SRH-168	AVA-96 UXCSRH-210	AVA-96 UXDSRH-210	AVA-96 UX2SRH-210	
Power Supply			АС1Ф,220V/50Hz	AC1 Φ,240V/50Hz	AC1Φ,220V/50Hz	AC1Φ,240V/50Hz	AC1Φ,220V/60Hz	АС1 Ф,220V/50Hz	АС1Ф,240V/50Hz	AC1 Φ,220V/60Hz	
Combined Outdoor Unit Model		Hi-Flexi Series									
Cooling Capacity		kW	14.0		22.4			28.0			
		Btu/h	47,800		76,500			95,600			
Heating Capacity		kW	13.7		21.9			24.5			
		Btu/h	46,800		74,700			83,600			
Power Input		kW	0.31	0.32	0.49	0.51	0.61	0.51	0.59	0.71	
Nominal Current		Α	1.45	1.34	2.25	2.14	2.79	2.35	2.48	3.25	
	Н	mm	37	70	486			486			
Outer Dimensions	W	mm	1,320		1,270			1,270			
	D	mm	800		1,069			1,069			
Sound Pressure Level (Overall A Scale)		dB	43		45			46			
Net Weight		kg	60		97			97			
Refrigerant			R410A								
Indoor Fan Air Flow Rate		m³/min	18		28			35			
External Static Pressure		Pa	200		220			220			
Drain Piping Size			VP25,Outer Diameter: ф32mm								
Refrigerant Liquid Line Size		mm	Ф9.53		Ф9.53			Ф9.53			
Refrigerant Gas Line Size		mm	Ф15.88		Ф19.05			ф22.2			
Temperature Range of Fresh Air Drawn			Cooling:20°C~43°C, Heating:-7°C~15°C								

#### NOTES:

- 1. The nominal cooling capacity and heating capacity are based on following conditions: Cooling operation conditions: 33°C DB ,28°C WB, piping length: 7.5m,piping lift :0m Heating operation conditions: 0°C DB,-2.9°C WB,piping length: 7.5m,piping lift :0m (Heating capacity is tested when defrosting is not available)
- The sound pressure level is based on following conditions: 1.5 Meter beneath the unit The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.
- An air filter with dust collection efficiency more than 50% needs to be attached to the duct system of the suction side at site.
- 4. When the resistance of the field-supplied duct is small, it may cause abnormal stoppage, malfunction, spraying water, etc. due to excessive air flow. And the duct, which is to be connected to this unit, shall be insulated for dew protection.
- All fresh air indoor unit is for processing fresh air load and not for stabilizing the room temperature. For adjusting the air conditioning load of the room, the additional air conditioner
- This unit shall be connected to Hi-Flexi outdoor unit. In case of connecting this unit with other indoor units in the same refrigerant cycle, calculate the capacity of this unit as 21.0kW(5HP), 33.6kW(8HP), 42.0kW(10HP).
- When Hi-Flexi outdoor unit connected only with all fresh air indoor unit, the configuration rate is 100% (Recommended).
- 8. Under cooling mode, when outdoor temperature is lower than 20°C, the system will automatically shift to ventilation operation; Under heating mode, when outdoor temperature is higher than 15°C, the system will automatically shift to ventilation operation; In case inlet temperature is below -7°C, All Fresh Air Indoor Unit will stop.

## **General Data for All Fresh Air Indoor Unit**

	Model			AVA-114 UX6SRH-300	AVA-114 UXBSRH-300	AVA-154 UX6SSH-400	AVA-154 UXBSSH-400	AVA-190 UX6STH-500	AVA-190 UXBSTH-500	AVA-190 UX6STH-600	AVA-190 UXBSTH-600	
	Power Supply		АСЗФ 380V/50Hz	АСЗФ 415V/50Hz	АСЗФ 380V/50Hz	АСЗФ 415V/50Hz	АС3Ф 380V/50Hz	АСЗФ 415V/50Hz	АСЗФ 380V/50Hz	АСЗФ 415V/50Hz		
	Combined Outdoor Unit Model		Hi-Flexi Series									
(	Cooling Capacity		kW	33.5		45.0		56.0		56.0		
			Btu/h	114,300		153,500		191,100		191,100		
	Heating Capacity		kW	26.8		36.0		44.8		44.8		
ľ			Btu/h	91,500		122,900		152,900		152,900		
	Power Input		kW	0.70	0.74	1.07	1.10	1.27	1.26	1.54	1.58	
	Nominal Current		Α	1.47	1.49	1.92	1.86	2.45	2.44	2.96	2.99	
	Outer Dimensions	Н	mm	486		635		735		735		
		W	mm	1,270		1,950		1,950		1,950		
		D	mm	1,069		805		805		805		
5	Sound Pressure Level		dB(A)	56		61		64		66		
1	Net Weight		kg	97		196		222		222		
F	Refrigerant			R410A								
I	Indoor Fan Air Flow Rate		m³/h	3000		4000		5000		6000		
	External Static Pressure		Pa	220		300		320		300		
,	Air Inlet Size		mm	1,100 x 415		1,522 x 522		1,522 x 622		1,522 x 622		
,	Air Outlet Size		mm	1,106 x 338		850 x 272		850 x 272		850 x 272		
I	Drain Piping Size			VP25		RC1(Internal Screw)						
	Refrigerant Liquid Line Size		mm	Ф12.7		Ф12.7		Ф15.88		Ф15.88		
	Refrigerant Gas Line Size		mm	Ф25.4		Ф25.4		Ф28.6		Ф28.6		
	Temperature Range of Fresh Air Drawn			Cooling:20°C~43°C, Heating:-7°C~15°C								

#### NOTES:

- 1. The nominal cooling capacity and heating capacity are based on following conditions:

  Cooling operation conditions: 33°C DB,28°CWB, piping length: 7.5m,piping lift:0m

  Heating operation conditions: 0°C DB,-2.9°C WB,piping length: 7.5m,piping lift:0m

  (Heating capacity is tested when defrosting is not available)
- The sound pressure level is based on following conditions: 1.5 Meter beneath the unit The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.
- An air filter with dust collection efficiency more than 50% needs to be attached to the duct system of the suction side at site.
- 4. When the resistance of the field-supplied duct is small, it may cause abnormal stoppage, malfunction, spraying water, etc. due to excessive air flow. And the duct, which is to be connected to this unit, shall be insulated for dew protection.
- All fresh air indoor unit is for processing fresh air load and not for stabilizing the room temperature. For adjusting the air conditioning load of the room, the additional air conditioner is required.

6. Under cooling mode, when outdoor temperature is lower than 20°C, the system will automatically shift to ventilation operation; Under heating mode, when outdoor temperature is higher than 15°C, the system will automatically shift to ventilation operation; In case inlet temperature is below-7°C, All Fresh Air Indoor Unit will stop.

