

Panasonic

BUSINESS

DX-AHU WITH VRF SYSTEMS



DX-AHU

Panasonic

VRF SYSTEMS



JOINING TWO FORCES

Panasonic, the global leading air conditioning company,
and SAIVER, manufacturer of high quality air handling units for more than half a century,
now join forces to bring DX-AHU with VRF Systems,
a new and comprehensive air conditioning solution to the market
through cutting edge technologies and superior reliability.



DX-AHU
by SAIVER

VRF Systems
by Panasonic



Case studies - DX-AHU with VRF Systems



Global Switch Data Center / Hong Kong - Installed in 2018



Sukmo Gallery / Thailand - Installed in 2018



Paramount Utropolis / Malaysia - Installed in 2017



Queen Mary Hospital / Hong Kong - Installed in 2015



Tesco Lotus / Thailand - Installed in 2015

Installation reference



Cheung Ching Community Centre / Hong Kong - Installed in 2017



SAIVER Air Handling Units incorporate the finely tuned, value engineered cost effective design aided by computer coupled with human ingenuity. SAIVER team comprises of highly experienced engineers and technicians totally committed to produce one of the finest Double Skinned Air Handling Units range in the World to meet the requirements of most demanding cost and quality conscious customer.

Iconic project



Marina Bay Sands

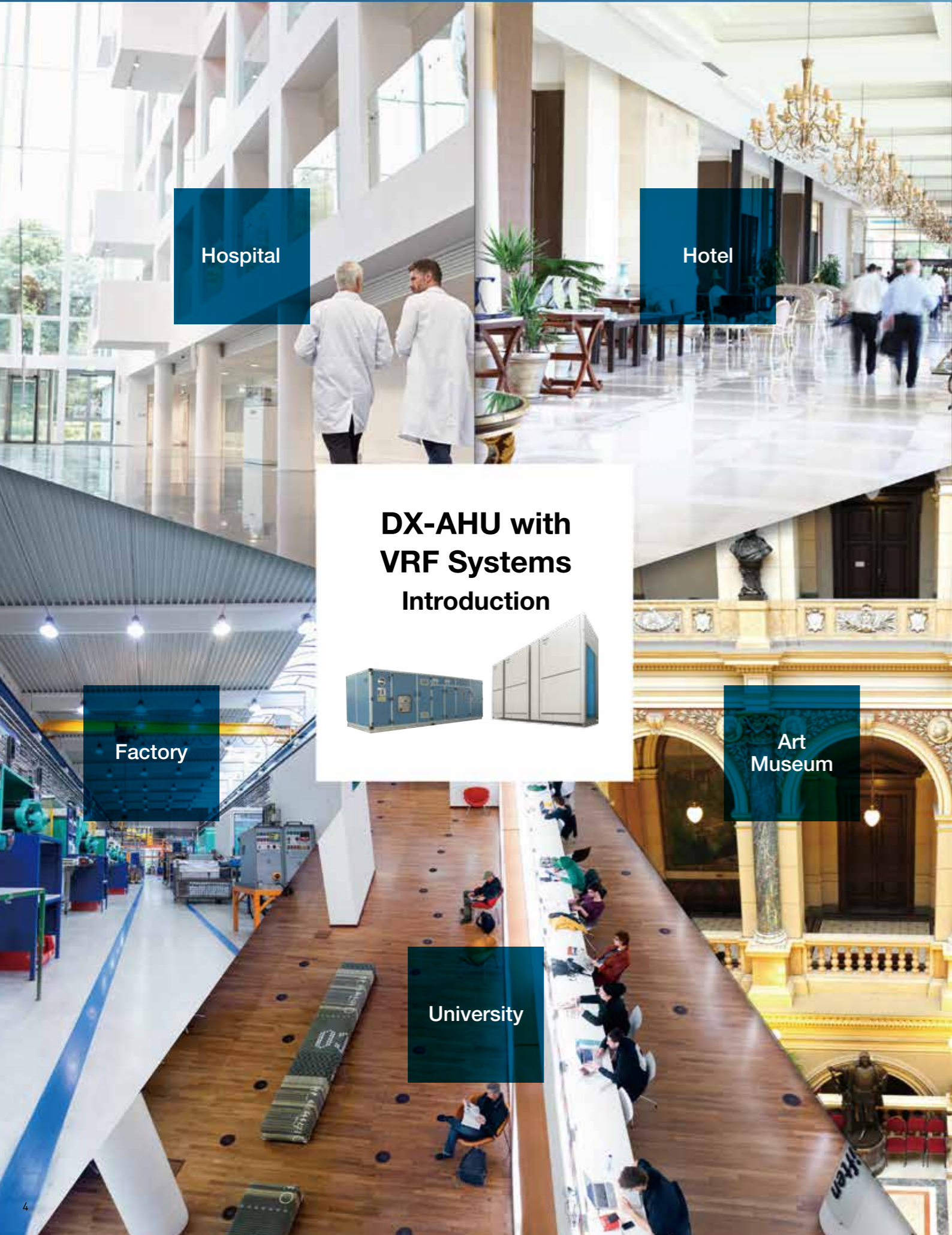
Panasonic

Panasonic's air conditioner business delivers leading-quality air conditioning solutions throughout the world. Its reliable and widely-trusted Japanese craftsmanship, with performance that has been refined for over 60 years since the start of the air conditioner business, is acknowledged as a global brand of the highest quality.

Iconic Project



Xiamen University



Hospital

Hotel

DX-AHU with VRF Systems Introduction



Factory




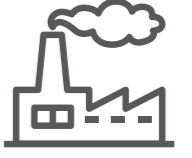

Art Museum

University

DX-AHU with VRF Systems applications

In any indoor environment, air quality and efficient air conditioning plays a vital role in maintaining our health, comfort and productivity. Whether it's a hotel, hospital or museum, every building matters. That's why Panasonic together with SAIVER has developed large scale DX-AHU with VRF Systems to suit a variety of business applications.

Benefits by applications

Hotel	Art Museum	University	Factory	Hospital
				
Easy air conditioning installation for both guest rooms(VRF) and large spaces(DX-AHU) like ballroom.	Effortless management of air conditioning for large spaces displaying items that require temperature and humidity control.	Effective air conditioning for classrooms and large spaces and rooms.	Customized air conditioning for processes requiring control of temperature and humidity.	Easily customized air conditioning for operating rooms, general wards and lobbies.

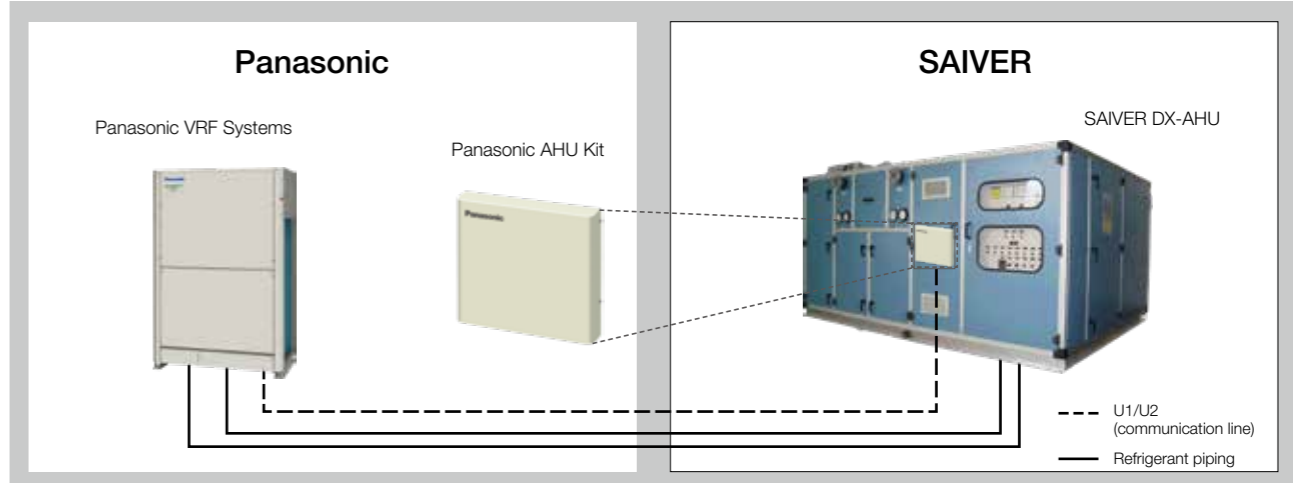
Panasonic VRF Systems

Panasonic's FSV-EX is a game-changing VRF systems delivering high energy-saving performance, powerful operation, reliability and comfort surpassing anything previously possible. It represents a true paradigm shift in air conditioning solutions. Taking quality to the extreme - that's the Panasonic challenge.

SAIVER AHU

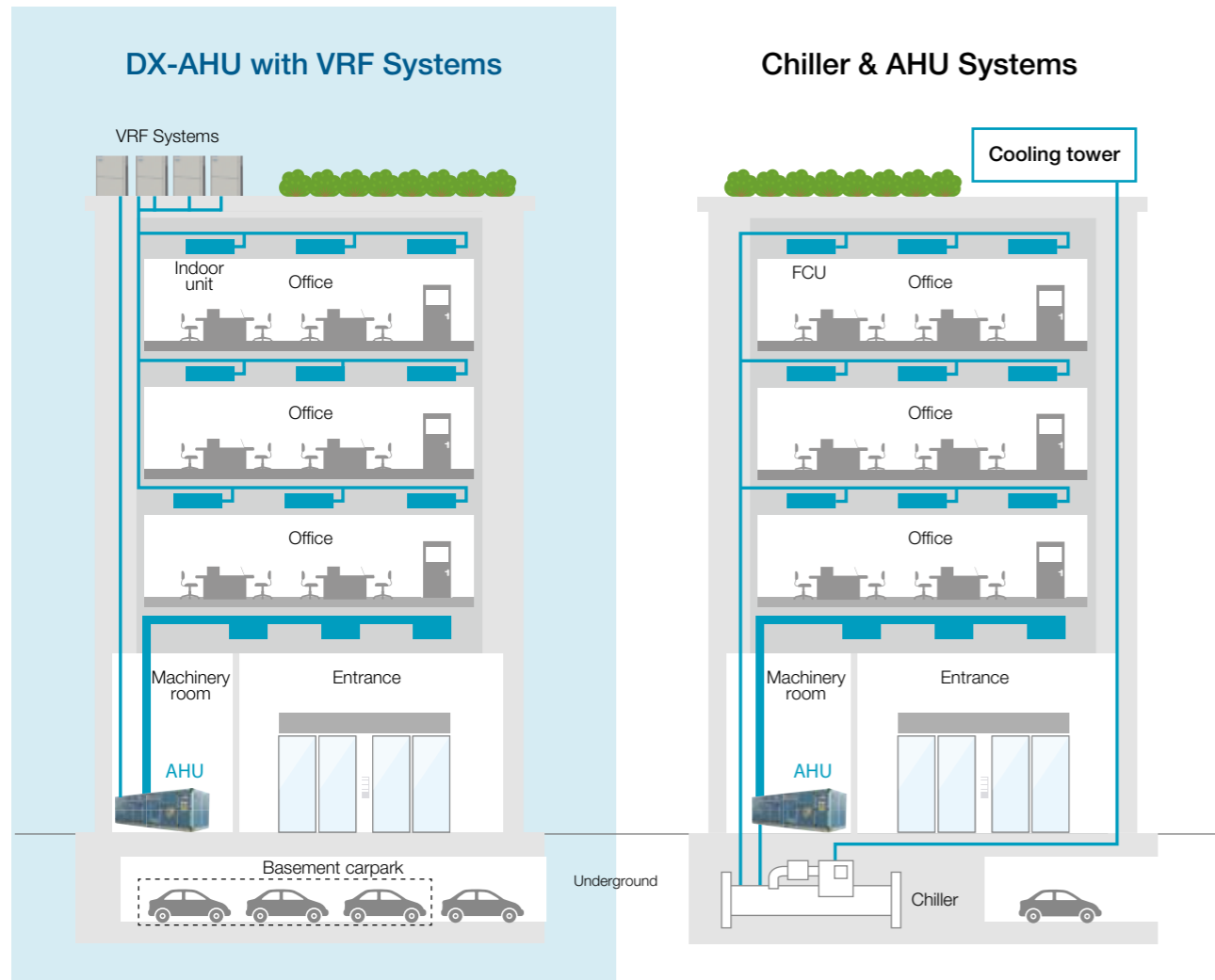
SAIVER's AHU/OHU is HVAC system used to regulate and circulate air as part of heating, cooling and ventilation with large air flow rate and high static pressure. Its configuration is also expandable with various add-ons such as heat recovery, heat pipe, filter, etc., providing a tailor-made solution according to modular size fitting for a variety of large sized applications.

System overview



Comparison of DX-AHU with VRF Systems to Chiller & AHU Systems

The combined system of VRF for building and AHU allows control of room air temperature and humidity delivering many benefits. The installation of DX-AHU with VRF Systems requires minimal effort as there's no need to add cooling towers, chiller and long piping on the premises. It also allows installation to spaces with limited construction flexibility. Even the maintenance cost of the total solution can be drastically reduced eliminating after care of cooling tower and water piping.



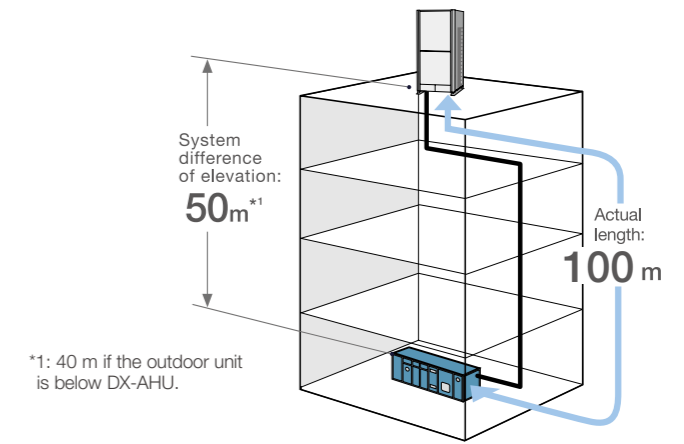
DX-AHU with VRF Systems		Chiller & AHU Systems
Easy maintenance (Same as common VRF Systems)	Maintenance	Require frequent maintenance (Cooling tower, chiller, pump & terminal)
Minimal maintenance cost	Maintenance Cost	Higher cost due to frequent maintenance
Small installation space (Only for AHU & VRF)	Space	Require larger installation space (AHU, FCU, chiller, cooling tower)
Simple system (HVAC ducting)	System	Complex system (HVAC ducting, chiller and water piping)
Simple control (Intelligent controller)	Control	Complex control (Variable frequency device, variable air volume control, complicated wiring)

Increased piping length for greater design flexibility

Adaptable to various building types and sizes.
Actual piping length: 100m / Equivalent 120m

*Please consult with Panasonic sales engineers in case piping elevation of over 50m is required.

*Connection of other types of indoor units is not available in case of DX-AHU with VRF in the same system.



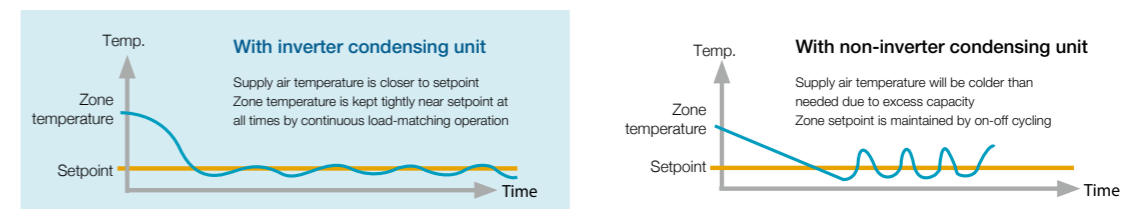
Better air treatment

Comparison of custom made DX-AHU with VRF Systems to conventional VRF Systems for fresh air.

DX-AHU with VRF Systems	Conventional VRF Systems for Fresh Air
<ul style="list-style-type: none"> Up to 13,000 CMH Large cooling capacity (up to 80HP) Large external static pressure provided (up to 500Pa) Lots of IAQ options (Eg. dehumidifier, UV light, PCO, heat pipe or heat wheel) 	<ul style="list-style-type: none"> Small air flow rate (Max. 2,100 CMH) Small cooling capacity (Max. 10HP) Limited external static pressure (Max. 200Pa) No space to install IAQ components

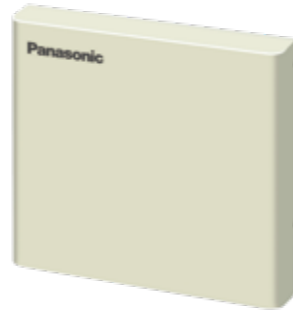
Comfort temperature control

Comparing inverter condensing unit to non-inverter condensing unit.
- Prevention of temperature hunting



Air Handling Unit Kit

Panasonic AHU Kit connects VRF systems to SAIVER Air Handling Unit systems using same refrigerant circuit as the VRF systems. With flexible connectivity, Panasonic AHU Kit can be easily integrated to air conditioning system for a high efficiency operation.



Standard kit

AHU Connection Kit

PCB, Power trans, Terminal block
CZ-280MAH1
CZ-560MAH1
HxWxD : 404x425x78 (mm)



Thermistor x2 (Refrigerant: E1, E3)



Timer remote controller.
CZ-RTC4
(must be purchased)
*Up to 500m wiring from AHU Kit to CZ-RTC4 (in case of 1 unit/unit)



Thermistor x2 (x1 in PACi) (Air : Tf, Tb)



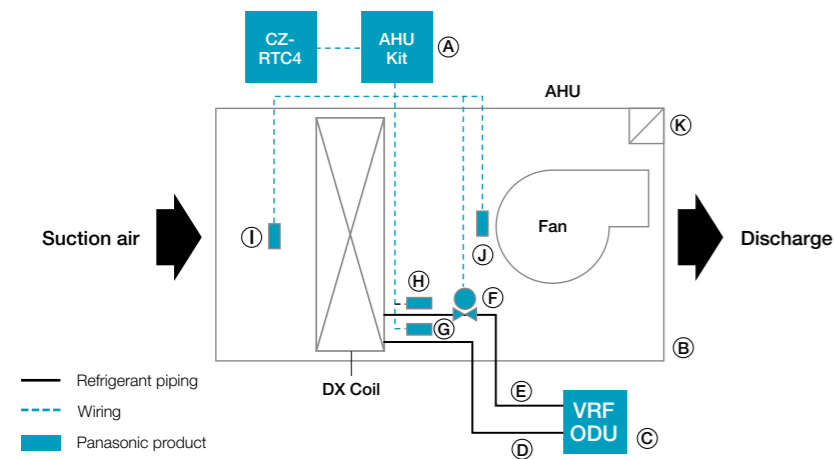
Optional connector

T10 connector

- Input signal= Operation ON/OFF
- Remote controller prohibition
- Output signal= Operating-ON status
- Alarm output (by DC12 V)

OPTION connector, DC12V outlet

- Output signal= Cool / Heat/Fan status
- Defrost
- Thermostat-ON



- A. AHU kit controller box (with control PCB)
- B. AHU unit
- C. VRF outdoor unit
- D. Gas piping (field supplied)
- E. Liquid piping (field supplied)
- F. Electronic expansion valve
- G. Thermistor for gas pipe
- H. Thermistor for liquid pipe
- I. Thermistor for suction air
- J. Thermistor for discharge air
- K. Fan local control panel; (optional / field supply)

Optional parts

Seri-Para I/O unit for DDC connection (CZ-CAPBC2)



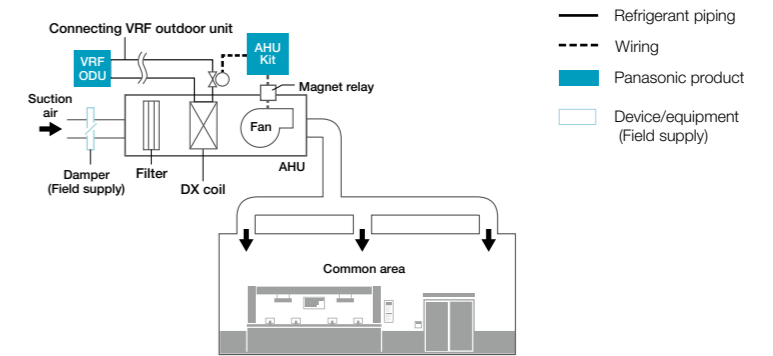
- Control and status monitoring is possible for individual indoor unit (1 group).
- In addition to operation and stop, there is a digital input function for air speed and operation mode.
- Temperature setting and measuring of the indoor suction temperature can be performed from central monitoring.
- The analog input for temperature setting is 0 to 10 V, or 0 to 140 Ohm.
- Power is supplied from the T10 terminal of the indoor units.
- Separate power supply also is possible (in case of suction temperature measuring).

AHU Kit usage example

Standard usage

(Used without DDC*)

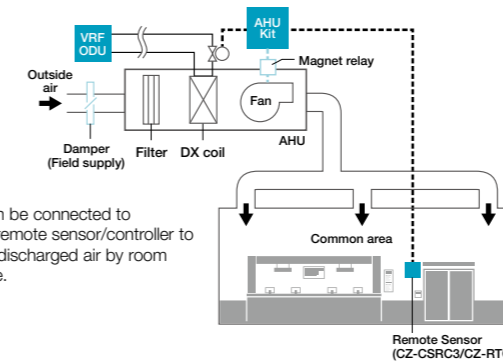
DX-AHU with VRF supplies large air volume to large spaces. AHU Kit can be used with DX-AHU without DDC or other external devices under certain conditions. (Please consult with Panasonic sales engineers).



*DDC...Digital Direct Controller

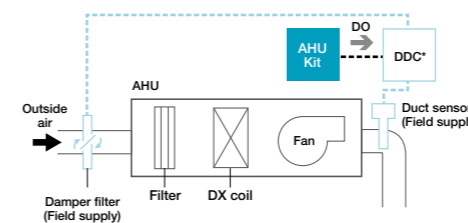
As OHU

Control by room temperature



AHU Kit can be connected to Panasonic remote sensor/controller to control the discharged air by room temperature.

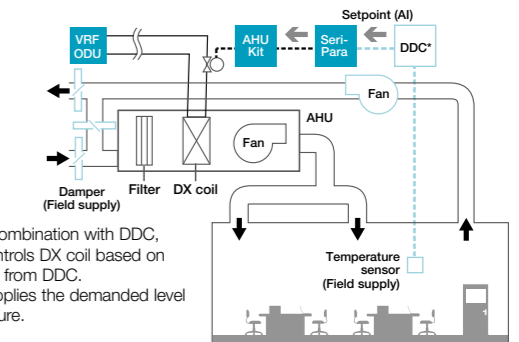
Send the On/Off status to DDC for damper control



When DDC controls external equipment (e.g. Dampers), AHU Kit gives On/Off status to DDC with dry contact. (Dampers are controlled by DDC.)

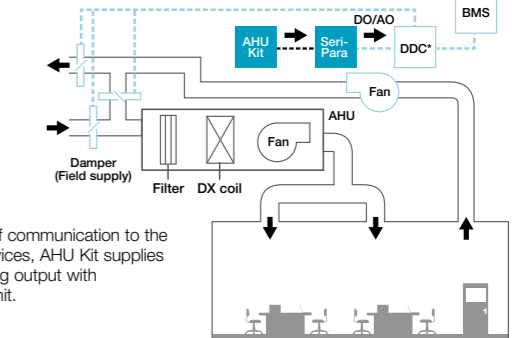
As AHU

Room temperature control by DDC



In case of combination with DDC, AHU Kit controls DX coil based on the setpoint from DDC. AHU Kit supplies the demanded level of temperature.

Digital/Analog output to external devices



On behalf of communication to the external devices, AHU Kit supplies digital/analog output with Seri-Para unit.

AHU Connection Kit / System Combination						
	Capacity (HP)	Outdoor unit combination			AHU kit combination	
		28 kW (10 HP)	U-10ME2H7			CZ-280MAH1
	56 kW (20 HP)	U-20ME2H7			CZ-560MAH1	
	84 kW (30 HP)	U-16ME2H7	U-14ME2H7		CZ-560MAH1	CZ-280MAH1
2-Way FSV-EX ME2 SERIES	112 kW (40 HP)	U-20ME2H7	U-20ME2H7		CZ-560MAH1	CZ-560MAH1
	140 kW (50 HP)	U-20ME2H7	U-16ME2H7	U-14ME2H7	CZ-560MAH1	CZ-560MAH1 CZ-280MAH1
	168 kW (60 HP)	U-20ME2H7	U-20ME2H7	U-20ME2H7	CZ-560MAH1	CZ-560MAH1 CZ-560MAH1
	196 kW (70 HP)	U-10ME2H7	U-20ME2H7x3		CZ-560MAH1x3 CZ-280MAH1	
	224 kW (80 HP)	U-20ME2H7x4			CZ-560MAH1x4	

*These are combination examples for space saving combination. These combinations are also compatible for high efficiency models on page 16-17.

DX-AHU Standard Series (30mm Panel)

AHU Performance

HP		10	20	30	40	
Ref	AHU	AHU-10HP	AHU-20HP	AHU-30HP	AHU-40HP	
Air Flow	CMH	4,140	8,568	13,032	17,100	
	CMS	1.15	2.38	3.62	4.75	
SA Fan	SP (External)	Pa	500	500	500	
	Motor	kW	2.2	4.0	5.5	7.5
Drive Method		Centrifugal Fan Belt Drive				
Power		3Ø 380V-480V 50/60Hz				
Total Cooling Capacity (kW)		28.0	56.0	85.0	113.0	
Coil	Cooling Coil	No. of row	6	6	6	
	No. of coil		1	1	1	
	Face Velocity	m/s	2.26	2.42	2.31	2.34
	Effective Area	m ²	0.508	0.984	1.565	2.032
Control Kit model	CZ-280MAH1	1	—	1	—	
	CZ-560MAH1	—	1	1	2	
Filter	Filtration Efficiency	G3				
Dimension	W	1102	1159	1712	1864	
	H	897	1049	1354	1507	
	L	2017	2169	2322	2474	
Total Weight	Kg	313	452	637	737	

Remarks: Height include the unit base 100mm

OHU Performance

HP		10	20	30	40	50	60	70	80	
Ref	OHU	OHU-10HP	OHU-20HP	OHU-30HP	OHU-40HP	OHU-50HP	OHU-60HP	OHU-70HP	OHU-80HP	
Air Flow	CMH	1,620	3,312	5,040	6,696	8,280	9,936	11,592	13,248	
	CMS	0.45	0.92	1.40	1.86	2.30	2.76	3.22	3.68	
SA Fan	SP (External)	Pa	500	500	500	500	500	500	500	
	Motor	kW	0.75	1.50	2.20	3.00	4.00	4.00	4.00	5.50
Drive Method		Centrifugal Fan Belt Drive								
Power		3Ø 380V-480V 50/60Hz								
Total Cooling Capacity (kW)		28.0	56.0	85.0	113.0	140.0	168.0	196.0	224.0	
Coil	Cooling Coil	No. of row	6	6	6	6	6	6	6	
	No. of coil		1	1	1	1	1	1	1	
	Face Velocity	m/s	2.02	2.34	2.32	2.49	2.17	2.29	2.30	2.35
	Effective Area	m ²	0.222	0.394	0.603	0.748	1.062	1.207	1.397	1.565
Control Kit model	CZ-280MAH1	1	—	1	—	1	—	1	—	
	CZ-560MAH1	—	1	1	2	2	3	3	4	
Filter	Filtration Efficiency	G3								
Dimension	W	644	797	1254	1254	1407	1559	1559	1712	
	H	897	1049	897	1049	1202	1202	1354	1354	
	L	2169	2017	2169	2169	2322	2322	2322	2322	
Total Weight	Kg	246	292	354	391	475	532	587	636	

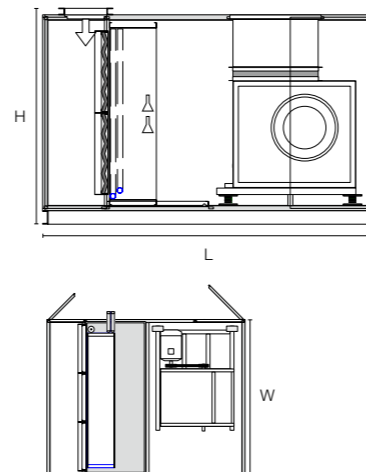
Remarks: Height include the unit base 100mm

* OHU...Outside air handling unit

Specifications

Standard Series (30mm Panel)	
Casing/Insulation	30mm Thickness double skinned panel
	0.6mm Thickness pre-coated GI sheet
	30mm Thickness polyurethane foam 40kg/m ³ density
Casing-frame	Extruded aluminum pentapost profile
Coil	DX coil
Tube	Copper tube
Fin	Aluminum slit
Header	Copper tube
Frame working pressure	Galvanized steel 1600kPa
Fan	Brand = Nicotra/Comfri
Type	Double width double inlet backward/Forward curved centrifugal belt drive fan
Wheel	Mild steel
Housing	Hot dip galvanized steel
Frame	Steel with polyester powder coating (Brand=Teco/WEG/Alliance)
Motor	Three-phase induction motor totally enclosed fan-cooled type Protection =IP55 insulation class=F
Vibration isolator	Spring isolator
Drain pan	Aluminum/painted GI
	Beneath the drain pan is covered with PU insulation 40kg/m ³ density (Brand = AAF/Mayair)
Air filter	Class = G3 (AFI=80-85%) Synthetic washable
	Size = Full (24" x 24" x 2") Half (12" x 24" x 2")

Drawings



DX-AHU Standard Series (60mm Panel with EC Fan)

AHU Performance

HP		10	20	30	40	50	60	70	80	
Ref	AHU	AHU-10HP	AHU-20HP	AHU-30HP	AHU-40HP	AHU-50HP	AHU-60HP	AHU-70HP	AHU-80HP	
Air Flow	CMH	4,140	8,568	13,032	17,100	21,420	25,704	29,988	34,272	
	CMS	1.15	2.38	3.62	4.75	5.95	7.14	8.33	9.52	
SA Fan	SP (External)	Pa	500	500	500	500	500	500	500	
	Motor	kW	1 x 2.95	1 x 5.25	2 x 5.25	2 x 5.25	2 x 5.25	3 x 5.25	3 x 5.25	3 x 5.25
Drive Method		EC Fan complete with DC Brushless Motor								
Power		3Ø 380V-480V 50/60Hz								
Total Cooling Capacity (kW)		28.0	56.0	85.0	113.0	140.0	168.0	196.0	224.0	
Coil	Cooling Coil	No. of row	6	6	6	6	6	6	6	
	No. of coil		1	1	1	1	1	1	1	
	Face Velocity	m/s	2.49	2.40	2.47	2.49	2.47	2.48	2.37	2.48
	Effective Area	m ²	0.462	0.991	1.463	1.906	2.408	2.880	3.520	3.840
Control Kit model	CZ-280MAH1	1	—	1	—	1	—	1	—	
	CZ-560MAH1	—	1	1	2	2	3	3	4	
Filter	Filtration Efficiency	G3								
Dimension	W	833	985	1138	1290	1595	1748	2053	2205	
	H	1238	1848	2153	2305	2305	2458	2458	2458	
	L	2205	2510	2510	2663	2663	2663	2663	2815	
Total Weight	Kg	350	534	712	780	890	1019	1108	1189	

Remarks: Height include the unit base 100mm

OHU Performance

HP		10	20	30	40	50	60	70	80	
Ref	OHU	OHU-10HP	OHU-20HP	OHU-30HP	OHU-40HP	OHU-50HP	OHU-60HP	OHU-70HP	OHU-80HP	
Air Flow	CMH	1,620	3,312	5,040	6,696	8,280	9,936	11,592	13,248	
	CMS	0.45	0.92	1.40	1.86	2.30	2.76	3.22	3.68	
SA Fan	SP (External)	Pa	500	500	500	500	500	500	500	
	Motor	kW	1 x 2.95	1 x 2.95	1 x 2.95	1 x 5.25	1 x 5.25	1 x 5.25	1 x 5.25	2 x 5.25
Drive Method		EC Fan complete with DC Brushless Motor								
Power		3Ø 380V-480V 50/60Hz								
Total Cooling Capacity (kW)		28.0	56.0	85.0	113.0	140.0	168.0	196.0	224.0	
Coil	Cooling Coil	No. of row	7	6	6	6	6	6	6	
	No. of coil		1	1	1	1	1	1	1	
	Face Velocity	m/s	2.46	2.41	2.30	2.35	2.32	2.32	2.40	2.50
	Effective Area	m ²	0.183	0.381	0.610	0.792	0.991	1.189	1.341	1.472
Control Kit model	CZ-280MAH1	1	—	1	—	1	—	1	—	
	CZ-560MAH1	—	1	1	2	2	3	3	4	
Filter	Filtration Efficiency	G3								
Dimension	W	680	833	833	985	985	985	1138	1138	
	H	933	1085	1543	1543	1848	2153	2000	2153	
	L	2205	2205	2510	2358	2510	2510	2510	2510	
Total Weight	Kg	260	313	378	463	541	591	612	712	

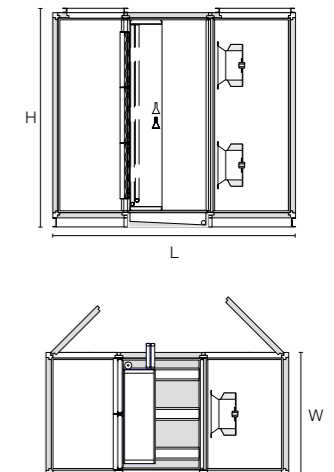
Remarks: Height include the unit base 100mm

* OHU...Outside air handling unit

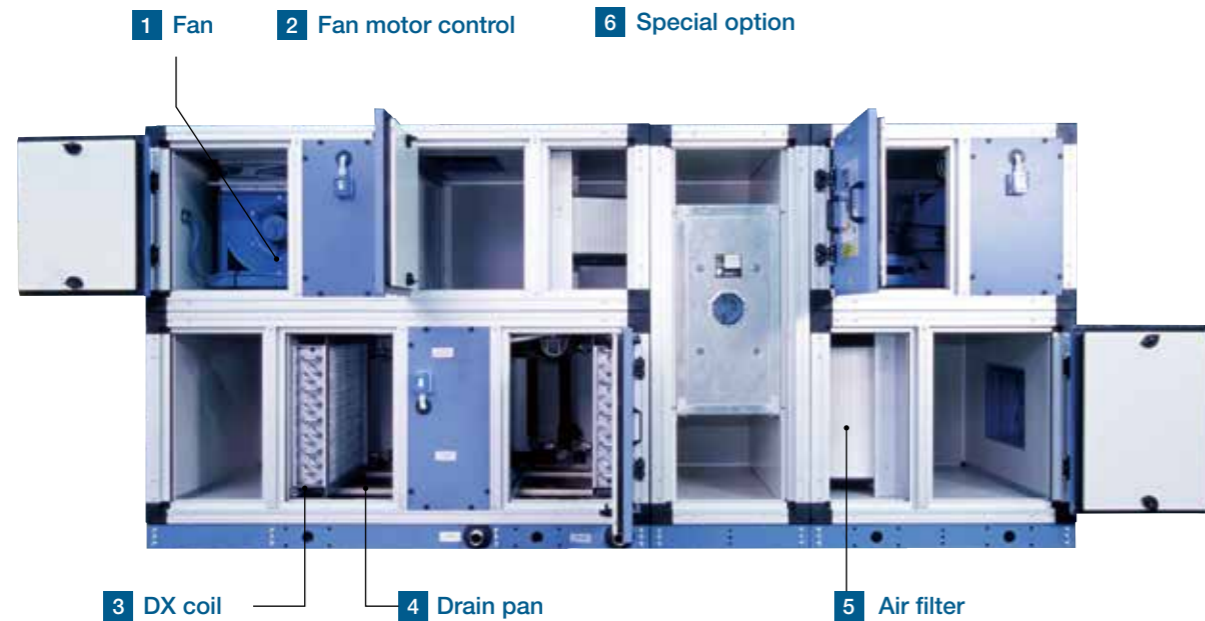
Specifications

Standard Series (60mm Panel with EC fan)	
Casing/Insulation	60mm Thickness double skinned panel
	0.6mm Thickness pre-coated gi sheet
	60mm Thickness polyurethane foam 40kg/m ³ density
Casing-frame	Extruded aluminum pentapost profile
Coil	DX coil
Tube	Copper tube
Fin	Aluminum slit
Header	Copper tube
Frame working pressure	Galvanized steel 1600kPa
Fan	Brand = ebm
Type	EC Plug fan
Wheel	Aluminum
Housing	N/A
Frame	N/A
Motor	(Brand = ebm) External rotor motor Protection =IP54 Insulation class=F
Vibration isolator	N/A
Drain pan	Aluminum/painted GI
	Beneath the drain pan is covered with PU insulation 40kg/m ³ density (Brand = AAF/Mayair)
Air filter	Class = G3 (AFI=80-85%) Synthetic washable
	Size = Full (24" x 24" x 2") Half (12" x 24" x 2")

Drawings



Wide range options to fit any use-case



1 Fan types

- Backward curve aerofoil
- Plug fan
- Standard in 60mm EC fan series



2 Fan motor controls

- VSD
- Fixed speed
- Class H motor
- Exn/ Exe explosion motor
- PM motor

3 DX coil material types

- Copper fin
- Blue fin
- Epoxy coated fin and coil
- Tinned copper fin
- Heresite coated fin
- Blygold coated fin



4 Drain pan types

- Galvanized steel
- Stainless steel (SS304/ SS316/ SS316L)
- Epoxy polyester powder coated GI



5 Air filter types

- Medium filter
- Extra filter
- Synthetic
- Bag
- HEPA
- Aluminum
- Cartridge
- ULPA
- Auto-roll filter
- Chemical filter
- Carbon filter



6 Special options

- Electric heater
- Mixing box
- Outdoor roof
- 88mm panel thickness
- Heat pipes
- Heat wheel
- Acoustic panel
- Dessicant wheel
- UV lamp
- Humidifier



Customization

- Airflow
- Capacity
- ESP
- Discharge direction
- Piping outlet

DX-AHU work flow / Certification



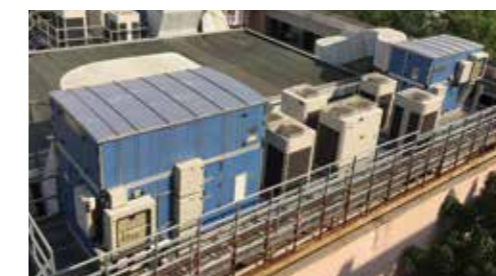
1 Selection software by SAIVER

- Sophisticated computer selection software.
- Flexible AHU dimension.
- Accurate quotation, technical data, detailed drawing.



2 Selection sheet

- -Data sheet, sound data
- -Energy class calculation
- -Psychrometric chart
- -Fan operating point
- -Dimensioning
- -Eurovent



3 Real Use case

- Customized system design
- E.G. : Outdoor installation
 - Outdoor canopy with slope
 - Rain hood, wire mesh
 - Anti-corrosion

Certification for SAIVER DX-AHU

- ✓ EUROVENT - EN1886
- ✓ VDI 6022 Hygienic standard
- ✓ AMCA Fan standard



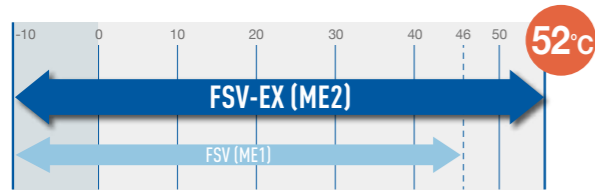
FSV-EX advantages

The most efficient, powerful and quiet systems in Panasonic's history. There has never been a VRF systems like it. It's the story of a true game changer.



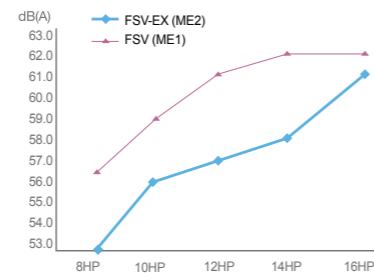
Extended operation range up to 52°C

The FSV-EX can provide cooling even when the outside temperature reaches a maximum of about 52°C. And amazingly, it can still operate at 100% capacity when the outside temperature is as high as 43°C.



Low-noise operation

Numerous technological innovations, including an improved compressor and a newly designed bell mouth and larger fan, have dramatically reduced the outdoor noise level.



Remarkable improvement on key components

4 Flat fan guard



1 Multiple large-capacity inverter compressor (More than 14HP)

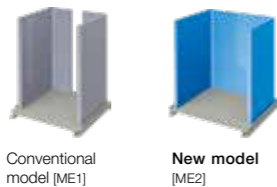
Extraordinary energy-saving performance

1 Multiple large-capacity all inverter compressors (more than 14HP)



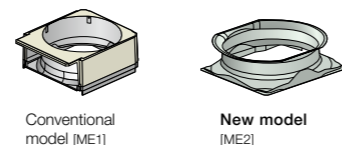
2 Enlarged heat exchanger surface area with triple surface*

*For 8 & 10HP unit, the heat exchanger is 2 row design.



Redesigned for smooth and better air discharge

3 Newly designed curved air discharge bell mouth for better aerodynamics

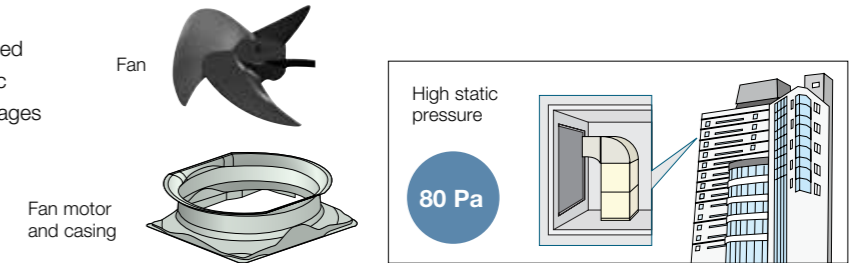


4 Large air discharge area with new flush surface top panel



High external static pressure on condensers

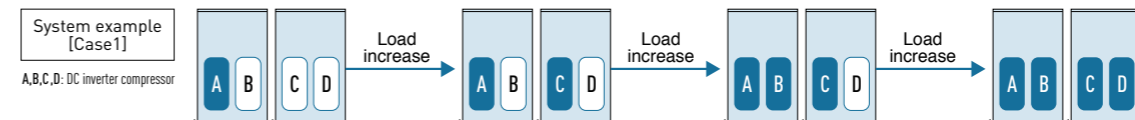
With a newly designed fan, fan guard, motor, and casing, new models can be custom-installed on-site to provide up to 80 Pa of external static pressure. An air discharge duct prevents shortages of air circulation, allowing outdoor units to be installed on every floor of a building.



Extended compressor life by uniform compressor operation time

The total run-time of compressors are monitored by a built-in microcomputer, which ensures that operation times of all compressors within the same refrigerant circuit are balanced.

Compressors with histories showing shorter run times are selected first, ensuring equal wear and tear across all units and extended the working life of the system.

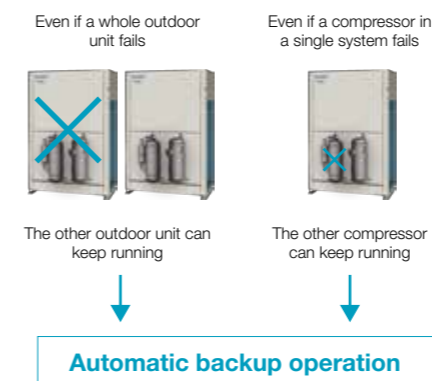


* Depend on accumulated operation time of each compressors.
* Compressor priority has possibility to be changed.
(e.g) Case1: A→C→B→D, Case2: C→A→D→B, Case3: A→C→D→B, Case4: C→A→B→D

Automatic backup operation

Automatic backup operation in the case of compressor failure or outdoor unit malfunction.

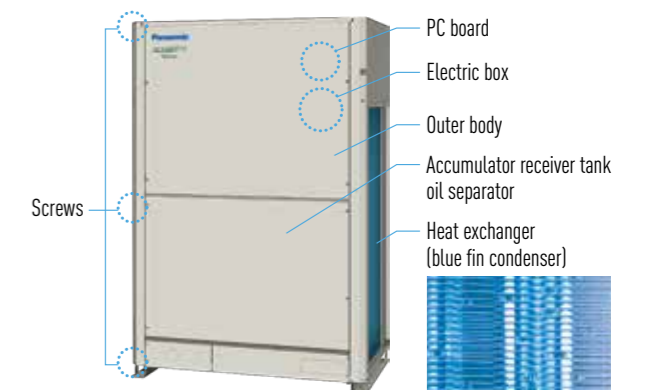
*Except for 10 HP single unit installation.
*Backup operation allows uninterrupted cooling or heating to continue whilst waiting for service. Users should contact their authorised service center as soon as fault occurs.



Hi-durability outdoor unit (option)








Corrosion-resistance treated for high resistance to rust and salty air to assure long-lasting performance.

Note: Selecting this unit does not completely eliminate the possibility of rust developing. For details concerning unit installation and maintenance, please consult an authorised dealer.



VRF Specifications

VRF Outdoor Unit Performance

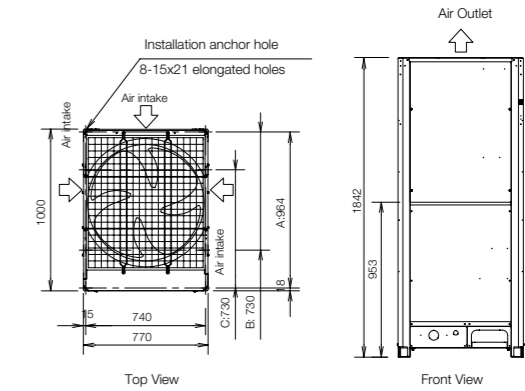
HP		10	20		30	40		50	
									
			Space saving	High efficiency		Space saving	High efficiency	Space saving	
Model Name		U-10ME2H7	U-20ME2H7	U-10ME2H7 U-10ME2H7	U-14ME2H7 U-16ME2H7	U-20ME2H7 U-20ME2H7	U-12ME2H7 U-12ME2H7 U-16ME2H7	U-20ME2H7 U-16ME2H7 U-14ME2H7	
Power Supply		380 / 400 / 415V-3-phase / 50Hz ; 380 / 400V / 3-phase / 60Hz							
Cooling Capacity	kW	28	56	56	85	113	113	140	
	BTU/h	95,600	191,100	191,100	290,100	385,700	385,700	477,800	
Dimension	Height	mm	1,842	1,842	1,842	1,842	1,842	1,842	
	Width	mm	770	1,540	1,600	2,420	3,140	3,660	4,020
	Depth	mm	1,000	1,000	1,000	1,000	1,000	1,000	
Net Weight	kg	210	375	420	630	750	855	1,005	
Electrical Ratings-Cooling	A	9.6/ 9.1/ 8.8	24.6/ 23.4/ 22.5	19.2/ 18.2/ 17.5	33.6/ 31.9/ 30.8	49.9/ 47.4/ 45.7	42.4/ 40.3/ 38.8	57.7/ 54.8/ 52.9	
Power Input	kW	5.57	14.90	11.10	19.70	30.20	25.40	34.20	
Starting Current	A	1	2	2	4	4	4	6	
Airflow Rate	m ³ /h	13,440	24,300	26,880	27,840	48,600	41,760	52,140	
Refrigerant Amount at shipping	kg	5.6	9.5	11.2	16.6	19.0	24.9	26.1	
External Static Pressure	Pa	80	80	80	80	80	80	80	
Piping Connections	Gas Pipe	mm	Ø22.22	Ø28.58	Ø28.58	Ø31.75	Ø38.10	Ø38.10	Ø38.10
	Liquid Pipe	mm	Ø9.52	Ø15.88	Ø15.88	Ø19.05	Ø19.05	Ø19.05	Ø19.05
	Balance Pipe	mm	Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø6.35
Ambient Temperature Operation Range		Cooling : -10°C (DB)~+52°C (DB), Heating: -25°C (WB)~+18°C (WB)							
Sound Pressure Level Normal Mode	dB(A)	56.0	59.0	59.0	63.0	62.0	63.5	64.5	
Sound Power Level Normal mode	dB	77.0	80.0	80.0	84.0	83.0	84.5	85.5	

Dimensions

10 HP

According to the installation site, you may choose the setting position in the depth direction of the anchor bolt from A, B or C.

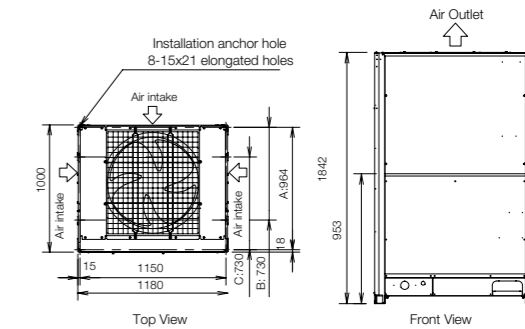
- A: (Installation hole pitch) For removing tube forward
- B: (Installation hole pitch) For removing tube downward
- C: (Installation hole pitch)



12 / 14 / 16 HP

According to the installation site, you may choose the setting position in the depth direction of the anchor bolt from A, B or C.

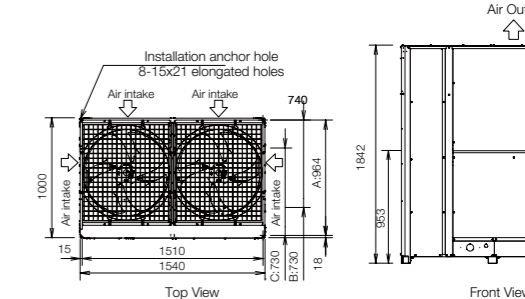
- A: (Installation hole pitch) For removing tube forward
- B: (Installation hole pitch) For removing tube downward
- C: (Installation hole pitch)






18 / 20 HP

According to the installation site, you may choose the setting position in the depth direction of the anchor bolt from A, B or C.

- A: (Installation hole pitch) For removing tube forward
- B: (Installation hole pitch) For removing tube downward
- C: (Installation hole pitch)



	50	60		70	80
					
	High efficiency	Space saving	High efficiency		
Model Name	U-10ME2H7 U-12ME2H7 U-12ME2H7 U-16ME2H7	U-20ME2H7 U-20ME2H7 U-20ME2H7	U-12ME2H7 U-16ME2H7 U-16ME2H7	U-20ME2H7 U-20ME2H7 U-20ME2H7 U-10ME2H7	U-20ME2H7 U-20ME2H7 U-20ME2H7 U-20ME2H7
Power Supply	380 / 400 / 415V-3-phase / 50Hz ; 380 / 400V / 3-phase / 60Hz				
Cooling Capacity	140	168	168	196	224
	477,800	573,400	573,400	668,900	764,500
Dimension	1,842	1,842	1,842	1,842	1,842
	4,490	4,740	4,900	5,570	6,340
	1,000	1,000	1,000	1,000	1,000
Net Weight	1,065	1,125	1,215	1,335	1,500
Electrical Ratings-Cooling	51.7/ 49.1/ 47.3	73.8/ 70.1/ 67.6	66.9/ 63.5/ 61.2	84.0/ 79.8/ 76.9	98.4/ 93.5/ 90.1
Power Input	30.60	44.70	39.60	50.30	59.6
Starting Current	5	6	7	7	8
Airflow Rate	55,200	72,900	55,680	86,340	97,200
Refrigerant Amount at shipping	30.5	28.5	33.2	34.1	38.0
External Static Pressure	80	80	80	80	80
Piping Connections	Ø38.10	Ø38.10	Ø38.10	Ø41.28	Ø44.45
	Ø19.05	Ø19.05	Ø19.05	Ø22.22	Ø22.22
	Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø6.35
Ambient Temperature Operation Range	Cooling : -10°C (DB)~+52°C (DB), Heating: -25°C (WB)~+18°C (WB)				
Sound Pressure Level Normal Mode	64.5	64.0	66.5	64.5	65.0
Sound Power Level Normal mode	85.5	85.0	87.5	85.5	86.0

AHU Smart Connectivity+

Business Bases (Asia)



AHU Smart Connectivity+ brings unrivaled benefits for connectivity and control at the same time.

SE8000 controller advantages and benefits

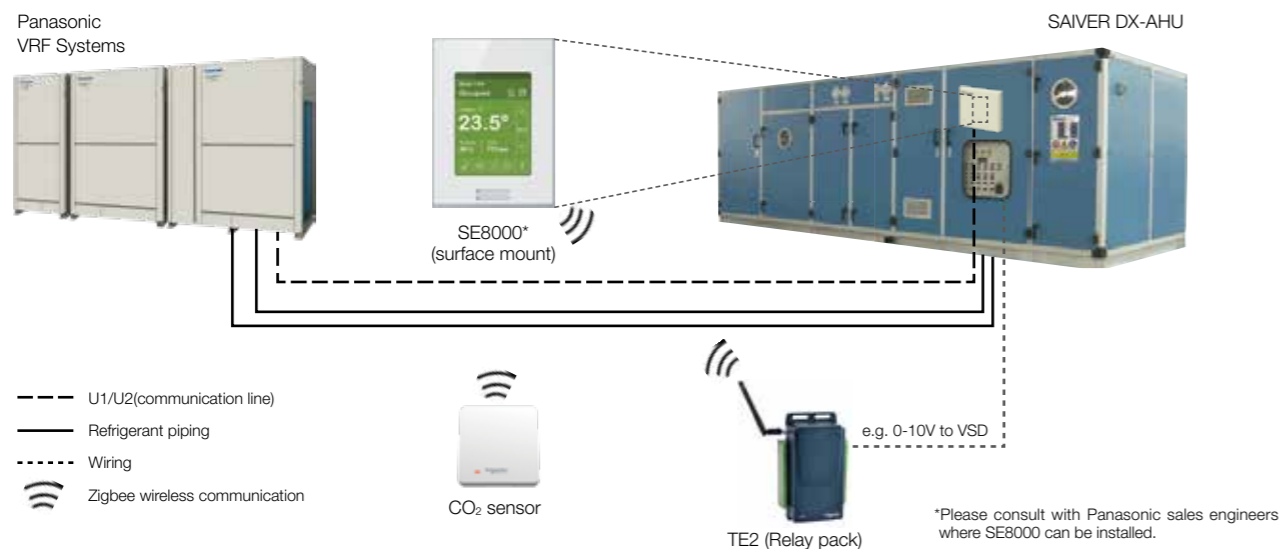
- DDC/BMS connectivity by BACnet/Modbus minimizes the cost of BMS interface
- Wireless sensing by Zigbee reduce hard wiring installation
- CO₂ wireless sensor improves IAQ with ventilation



* Also available Modbus RTU.

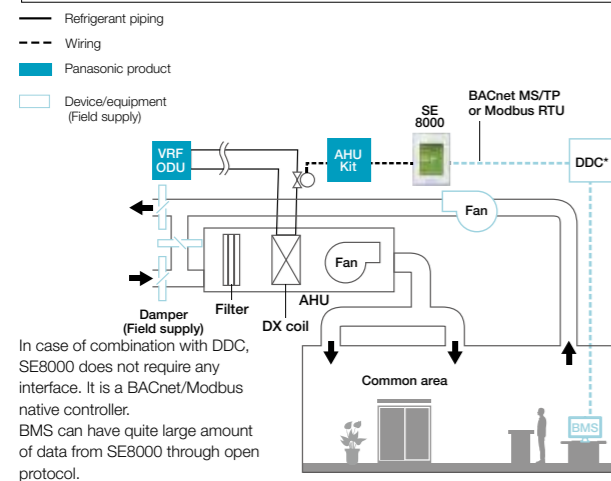
System diagram

Schneider Electric SE8000 controller can be easily integrated with DX-AHU with VRF Systems maximizing the air quality management of each products. Various types of devices such as sensor, relay pack can be connected to control and improve IAQ.

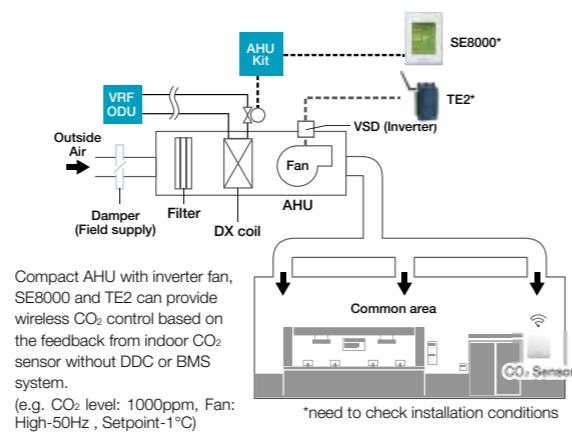


Usage example

DDC(BMS) connectivity



Compact AHU with CO₂ control



Panasonic together with SAIVER has a diverse network of sales, production and R&D facilities, deliver innovative products incorporating cutting-edge technologies that set the standard for air conditioners worldwide.



