DC Inverter VRF Air Conditioning System

Trane - by Trane Technologies (NYSE: TT), a global climate innovator — creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit *trane.com or tranetechnologies.com*.

12/2025

Trane is well positioned to lead the industry in creating comfortable, sustainable and efficient environments with exceptional products.

Trane, a US-based air conditioning expert, has been committed to developing energy-efficient, comfortable and environmentally friendly air conditioning products and system application services since its establishment in 1913.

Trane is now a major global supplier of heating, ventilation, air conditioning and building automation systems. Trane is committed to creating and sustaining the Group's philosophy of safety, comfort, efficiency and environmental protection, providing customers with a full range of high-quality HVAC and control systems, as well as comprehensive engineering installation, building management and parts support services.

GEN Elite

- Energy efficiency
- Reliable quality
- Comfortable and eco-friendly

Showcase

Office building
Building area: 161,000 m²
Product: GEN
Capacity: 5,474 HP

Chain store
Building area: 300 ~ 400 m²
Product: GEN, Odyssey
Capacity: 100 sets

Hospital
Building area: 70,000 m²
Product: GEN
Capacity: 1,442 HP

Metro
No. of stations 26
Product: GEN3, TVR II
Capacity: 1,276 HP

Hotel
Product: GEN, Illusion
Capacity: 8,308 HP

Villa & apartment
Developer: Country Garden

World-class R&D capability provides a strong guarantee of high quality

In China, we have the R&D capability in pace with the world to manufacture a broad range of VRF products adapted to the Chinese market, making the product line more complete.

6 R&D centers and 21 technical facilities around the world

More than 1,600 engineers working on technical improvement

The largest engineering and technology laboratory in the industry

R&D laboratory

The A sia-Pacific R&D Center has established a R&D laboratory with a total investment of more than RMB 100 million in Taicang facility, which is second only to Trane's US laboratory in terms of scale and capability, and is a leading R&D laboratory in the industry in China and Asia.

Postdoctoral research station

In 2007, Trane R&D Center e stablished China's first international postdoctoral research station of HVAC in Taicang, at its own expense. It is the first international high-tech research station in the field of HVAC in China.

Comprehensive product portfolio

Trane with its rich product family, advanced professional technology and customer-oriented services has long provided various types of central air conditioning and application systems for customers in various industries. Its products range from small residential central air conditioners to large chillers; from fan coil units to modular air handlers; from unit controls to building management systems, etc., and are widely used in electronics, industry, commercial buildings, supermarket chains, financial institutions, government projects, high-end residences, education and culture and many other fields.

Large commercial HVAC units

Centrifugal chiller

Scroll chiller

Air-side unit

Terminal device

Small and medium-sized units

VRF air conditioning system

Air-cooled heat pump

Air-cooled ducted system

Water source & Geothermal heat pump

Integrated system

Building automation system

TracerSummit control software

Building control units BCU

Programmable controller MP581

GEN-NET

Continuous upgrade of Trane VRF systems

Based on a century of experience in central air conditioning products, with the application of advanced technologies in various products for residential and commercial use, Trane has introduced the latest 180 ° sine wave DC inverter technology into the GEN series to provide more efficie nt and r eliable air conditioning system for customers around the world.

2024

2022

TVR WIZ All DC Inverter
Commercial VRF air conditioning system upgrade

2018

GENYUE
Commercial VRF air conditioning system with all DC inverter compressor

2015

GEN3
commercial VRF air conditioning system with DC inverter compressor

2013

TVRII
commercial VRF air conditioning system with digital scroll compressor

2011

TVR
commercial VRF air conditioning system with digital scroll compressor

2002

Impression
residential VRF air conditioning system with AC inverter compressor

2002

1995

In 1995, Trane entered the Chinese market and set up two large-scale production bases in Taicang, Jiangsu and Zhongshan, Guangdong successively. In 2004, Trane established its Asia R&D Center in Shanghai. Today, Trane a robust presence all over China.

1938

Trane launched its revolutionary product - hermetic 3-stage centrifugal water chiller.

1931

The first Trane air conditioner was developed successfully.

1913

Joined by his son Reuben, Jame Trane developed an innovative HVAC product, and since then, Trane has been committed to developing energy-efficient, comfortable and environmentally friendly air conditioning products and system application technologies.

James Trane

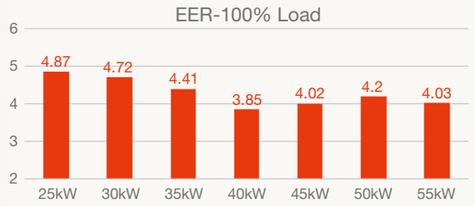
Reuben Trane

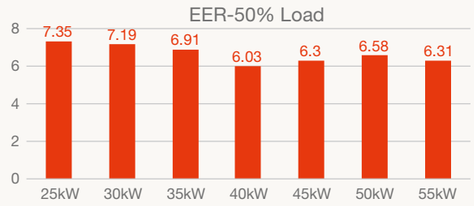
1885

The Trane Company was incorporated by Jame Trane in La Crosse, Wisconsin with his invention of steam heating system, which laid the groundwork for the Company's initial operations.

Outdoor Unit Features | Energy efficient

High EER





Dramatic boost in performance thanks to all inverter compressor system

GEN Elite C series all uses high-efficiency DC inverter compressor, which effectively improves the adjustable capacity range and dynamically adjusts the output based on load changes, together with advanced inverter technology and unique piping design to achieve a significant increase in system performance.

Output on demand achieves high energy efficiency

All inverter air conditioning system: The inverter compressors are turned on simultaneously according to the actual air conditioning demand, and can fully meet the demand and output on demand due to the adjustable capacity.
Non-inverter air conditioning system: Due to the non-linear control of the output, the output is usually higher than the demand first, and then slowly decreases to approach the actual demand, which inevitably results in energy waste.

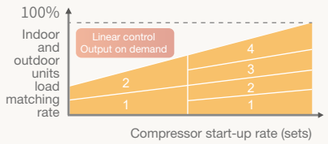


Figure a. GEN Elite C all inverter air conditioning system capacity diagram

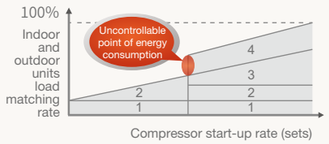
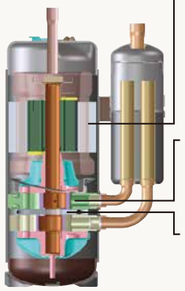


Figure b. Non-inverter air conditioning system capacity diagram

Precise temperature control guarantees stable and comfortable environment

Once the target room temperature is set, the air conditioner starts to bring the room temperature close to the set temperature. Non-inverter air conditioning system will stop running upon reaching the set temperature and start again when the temperature deviates from the set temperature to a certain extent, resulting in noticeable changes in room temperature and affecting comfortable experience.
Inverter air conditioning system can adjust the output by changing the compressor speed after the room temperature reaches the set value, and keep running to realize almost no fluctuation of the room temperature and provide more comfortable experience.

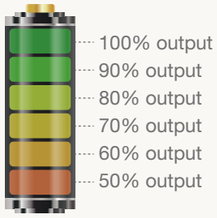
High Efficiency Compressor



- **Highly Efficient DC Motor**
  - Creative motor core design
  - High density neodymium magnet
  - Concentrated type stator
  - Wider operating frequency range
- **Better Balance and Extremely Low Vibration**
  - Twin eccentric cams
  - 2 balance weights
- **Highly Stable Moving Parts**
  - Optimal material matching rollers and vanes
  - Optimize compressor drive technology
  - Highly robust bearings
  - Compact structure

Energy Management

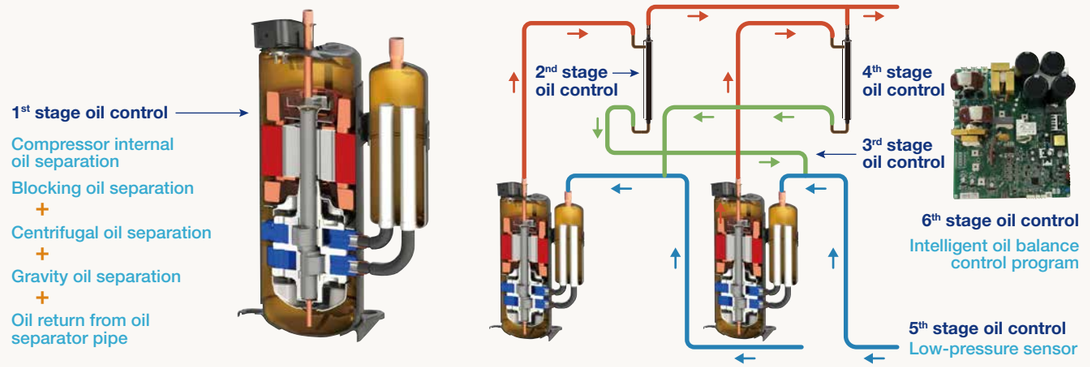
For projects with temporary electricity supply restrictions, the outdoor unit supports 50-step energy management which can be set to output 50-100% capacity in 5% increments. It prevents tripping during conditions of restricted electricity supply and allows the system to continue to operate.



Efficient oil return, intelligent oil control

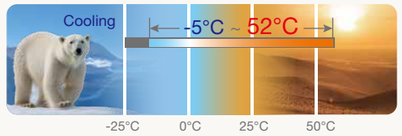
Sufficient and balanced oil are supplied to each outdoor unit and each compressor under any working conditions to guarantee the safe operation of the outdoor unit and compressor, and avoid potential hazards caused by oil shortage. The unique automatic oil balance system improves the oil tank capacity of high-speed compressor and the reliability of the compressor, ensuring cooling performance while improving reliability.

1st stage: Compressor internal oil separation
2nd stage: High efficiency oil separator with a separation efficiency up to 99.99%
3rd stage: Oil balance technology between compressors achieves oil balance; intelligent spraying design for cooling control avoids too high oil temperature
4th stage: Pressure control technology in the new oil return control program controls the appropriate pressure and compressor operating frequency during oil return, resulting in more thorough oil return
5th stage: Accumulator return oil design avoids oil retention
6th stage: The unique automatic oil balance system improves the oil tank capacity of high speed compressor and the reliability of the compressor, ensuring cooling/heating performance while improving reliability



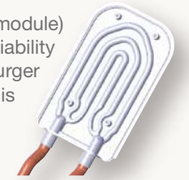
Wide Operation Range

Thanks to the refrigerant cooling technology, the Gen Elite C Series VRF can operate stably in a temperature range as low as -5°C and as high as 52°C.



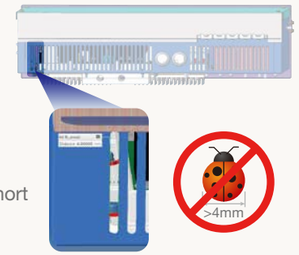
Refrigerant Cooling design

- Patented technology microchannel refrigerant cooling plate
- 1. decrease IPM (intelligent power module) temperature and enhance the reliability
- 2. Compared with traditional hamburger style Heatsink, IPM temperature is 5°C lower, Compared with air cooling method, IPM temperature is 20°C lower.



Insects and reptiles prevention design

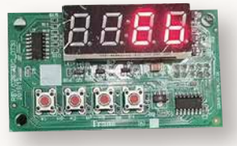
Enclosed design for Control box can effectively prevent short circuits caused by insects and reptiles.



Easy Service

Confirm detailed operational and error status without using any specific equipment.

- Operation status
- Temperature/Pressure status
- Compressor operation status
- Error status
- Address of outdoor unit



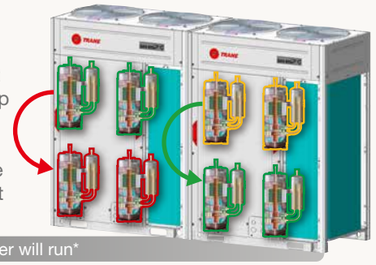
Outdoor Unit Features | Reliable quality

Double Duty Cycling

In two compressors and multiple units, one can run in backup for another.

Unit Backup

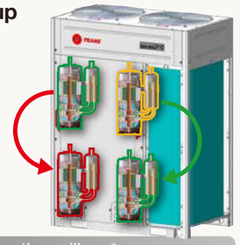
In a multi-unit system, the different units act as a backup to each other, ensuring that the system can continue to operate if one unit fails.



One ODU fails, another will run*

Compressor Backup

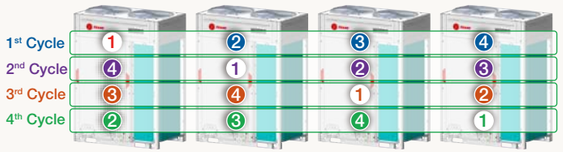
In unit with two compressors, the two compressors act as a backup to each other, ensuring that the system can continue to operate if one compressor fails.



One compressor fails, another will run*

Unit Duty Cycling

In a multi-unit system, duty cycling equalizes the running time of each outdoor unit, significantly extending unit lifespan.



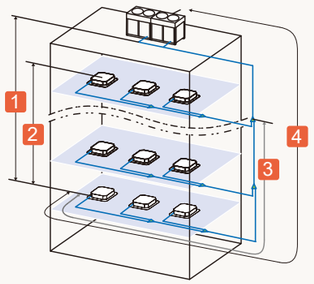
Compressor Duty Cycling

In units with two compressors, duty cycling equalizes the running time of each compressor, significantly extending compressor lifespan.

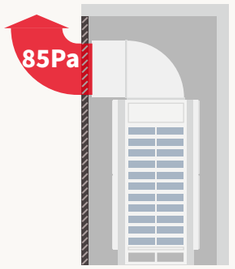
Long Piping Capability

The Gen Elite C series can support a total piping length of up to 1000m, an installation height difference of up to 110m between indoor and outdoor units, and up to 30m between indoor units, making the Gen Elite C series VRF adaptable to a wide range of building designs.

1. Max. height difference between indoor and outdoor units: 110m (outdoor units are lower than indoor units)
2. Max. height difference between indoor units: 30m
3. Max. equivalent length from the first manifold to the farthest indoor unit: 40m
4. Max. equivalent pipe length between indoor andoutdoor units: 230m
5. Long main pipe up to 1,000m



The static pressure of the outdoor unit can be up to 85Pa which facilitates installation of the unit on each floor of high-rise buildings or on balconies.



Wide Combination Ratio

Compared to traditional VRF with combination ratio of 50-130%, the Gen Elite C Series VRF can be extended to 50-150%, and the wider combination ratio allows for more flexible system configuration. The larger combination ratio can be applied to long-term part-load operation scenarios, allowing for further reduction in installation costs.

Auto Addressing

Addresses for all indoor units and combined outdoor units can be assigned automatically by the Gen Elite C series, further simplifying installation.

Single Units

Model		TUC0025SD	TUC0030SD	TUC0035SD	TUC0040SD	TUC0025AD	TUC0030AD	TUC0035AD	TUC0040AD	TUC0045AD	TUC0050AD	TUC0055AD	TUC0060AD	TUC0065AD	TUC0070AD
Cooling capacity	kW	25	30	35	40	25	30	35	40	45	50	55	60	65	70
	Btu/h	85,300	102,400	119,400	136,500	85,300	102,400	119,400	136,500	153,500	170,600	187,700	204,700	221,800	238,800
Power supply		380V/3Phase/50Hz/60Hz													
COP (Capacity 100%)	kW/kW	4.87	4.72	4.41	3.85	5.04	4.79	4.40	4.04	4.02	4.20	4.03	3.83	3.87	3.54
Power consumption	kW	5.13	6.36	7.94	10.39	4.96	6.26	7.95	9.90	11.19	11.90	13.65	15.66	16.80	19.75
Rated Current	A	8.6	10.7	13.4	17.5	19.9	20.9	23.8	25.6	27.6	32.2	38.7	39.6	41.4	47.9
Maximum overcurrent protection	A	32		40		25		32			40		50		63
Capacity control	%	15-100%													
Fan unit type		Propeller fan													
Fan discharge direction		Horizontal				Vertical									
Airflow	m^3/h	9,150	9,850	11,150	11,900	8,000	8,800	9,500	10,500	11,300	15,300	16,500	18,000	19,000	19,500
	cfm	5,390	5,800	6,560	7,000	4,710	5,180	5,590	6,180	6,650	9,010	9,710	10,590	11,180	11,480
Sound pressure level	dB(A)	56	58	60	61	56	57	59	60	61	63	64	65	66	67
External static pressure available	Pa	30				85									
Dimensions (HxWxD)	mm	1604 x 940 x 460				1720 x 925 x 785					1720 x 1295 x 785				
Net weight	kg	142		150		188		190		200	235	270		280	285
Compressor type		Hermetic twin rotary													
Refrigerant charge R410A	kg	3.5		5.1		5.2		5.5		7.4	7.6	7.9	8.1	12.2	12.5
Gas side connection size	mm	ø 25.4										ø 28.6		ø 31.8	
Liquid side connection size	mm	ø 12.7										ø 15.9		ø 19.1	
Operating temperature range	℃	-5 to 55													

Notes:
1. Nominal capacities are based on the following conditions.
   Cooling: indoor temperature: 27°C DB, 19°C WB; outdoor temperature: 35°C DB; pipe length: 7.5m; height difference between indoor and outdoor units: 0m.
2. Sound level: Anechoic chamber conversion value, measured at a point 1m in front of the unit at a height of 1.5m.

Outdoor Unit Lineup

Model Name		Cooling Capacity kW	Cooling Capacity HP	Cooling Capacity Btu/h	Power Input (kW)	COP	ODU Combination Models ODU #1	ODU #2	ODU #3	ODU #4
TUC0025SD		25	10	85,300	5.1	4.87	TUC0025SD			
TUC0030SD		30	12	102,400	6.4	4.72	TUC0030SD			
TUC0035SD		35	14	119,400	7.9	4.41	TUC0035SD			
TUC0040SD		40	16	136,500	10.4	3.85	TUC0040SD			
TUC0025AD		25	10	85,300	5.0	5.04	TUC0025AD			
TUC0030AD		30	12	102,400	6.3	4.79	TUC0030AD			
TUC0035AD		35	14	119,400	8.0	4.40	TUC0035AD			
TUC0040AD		40	16	136,500	9.9	4.04	TUC0040AD			
TUC0045AD		45	18	153,500	11.2	4.02	TUC0045AD			
TUC0050AD		50	20	170,600	11.9	4.20	TUC0050AD			
TUC0055AD		55	22	187,700	13.7	4.03	TUC0055AD			
TUC0060AD		60	24	204,700	15.7	3.83	TUC0060AD			
TUC0065AD		65	26	221,800	16.8	3.87	TUC0065AD			
TUC0070AD		70	28	238,800	19.8	3.54	TUC0070AD			
TUC0075AD		75 (35+40)	30	255,900	17.9	4.20	TUC0035AD	TUC0040AD		
TUC0080AD		80 (40+40)	32	273,000	19.8	4.04	TUC0040AD	TUC0040AD		
TUC0085AD		85 (40+45)	34	290,000	21.1	4.03	TUC0040AD	TUC0045AD		
TUC0090AD		90 (45+45)	36	307,000	22.4	4.02	TUC0045AD	TUC0045AD		
TUC0095AD		95 (45+50)	38	324,100	23.1	4.11	TUC0045AD	TUC0050AD		
TUC0100AD		100 (40+60)	40	341,200	25.6	3.91	TUC0040AD	TUC0060AD		
TUC0105AD		105 (45+60)	42	358,200	26.9	3.91	TUC0045AD	TUC0060AD		
TUC0110AD		110 (40+70)	44	375,300	29.7	3.71	TUC0040AD	TUC0070AD		
TUC0115AD		115 (45+70)	46	392,300	30.9	3.72	TUC0045AD	TUC0070AD		
TUC0120AD		120 (60+60)	48	409,400	31.3	3.83	TUC0060AD	TUC0060AD		
TUC0125AD		125 (60+65)	50	426,500	32.5	3.85	TUC0060AD	TUC0065AD		
TUC0130AD		130 (60+70)	52	443,500	35.4	3.67	TUC0060AD	TUC0070AD		
TUC0135AD		135 (65+70)	54	460,600	36.6	3.69	TUC0065AD	TUC0070AD		
TUC0140AD		140 (70+70)	56	477,600	39.5	3.54	TUC0070AD	TUC0070AD		
TUC0145AD		145 (40+45+60)	58	494,700	36.8	3.95	TUC0040AD	TUC0045AD	TUC0060AD	
TUC0150AD		150 (45+45+60)	60	511,700	38.0	3.94	TUC0045AD	TUC0045AD	TUC0060AD	
TUC0155AD		155 (45+50+60)	62	528,800	38.8	4.00	TUC0045AD	TUC0050AD	TUC0060AD	
TUC0160AD		160 (40+60+60)	64	545,900	41.2	3.88	TUC0040AD	TUC0060AD	TUC0060AD	
TUC0165AD		165 (45+60+60)	66	562,900	42.5	3.88	TUC0045AD	TUC0060AD	TUC0060AD	
TUC0170AD		170 (50+60+60)	68	580,000	43.2	3.93	TUC0050AD	TUC0060AD	TUC0060AD	
TUC0175AD		175 (45+60+70)	70	597,000	46.6	3.76	TUC0045AD	TUC0060AD	TUC0070AD	
TUC0180AD		180 (60+60+60)	72	614,100	47.0	3.83	TUC0060AD	TUC0060AD	TUC0060AD	
TUC0185AD		185 (45+70+70)	74	631,100	50.7	3.65	TUC0045AD	TUC0070AD	TUC0070AD	
TUC0190AD		190 (60+60+70)	76	648,200	51.1	3.72	TUC0060AD	TUC0060AD	TUC0070AD	
TUC0195AD		195 (60+65+70)	78	665,300	52.2	3.73	TUC0060AD	TUC0065AD	TUC0070AD	
TUC0200AD		200 (60+70+70)	80	682,300	55.2	3.63	TUC0060AD	TUC0070AD	TUC0070AD	
TUC0205AD		205 (65+70+70)	82	699,400	56.3	3.64	TUC0065AD	TUC0070AD	TUC0070AD	
TUC0210AD		210 (70+70+70)	84	716,400	59.3	3.54	TUC0070AD	TUC0070AD	TUC0070AD	
TUC0215AD		215 (45+50+60+60)	86	733,500	54.4	3.95	TUC0045AD	TUC0050AD	TUC0060AD	TUC0060AD
TUC0220AD		220 (40+60+60+60)	88	750,600	56.9	3.87	TUC0040AD	TUC0060AD	TUC0060AD	TUC0060AD
TUC0225AD		225 (45+60+60+60)	90	767,600	58.2	3.87	TUC0045AD	TUC0060AD	TUC0060AD	TUC0060AD
TUC0230AD		230 (50+60+60+60)	92	784,700	58.9	3.91	TUC0050AD	TUC0060AD	TUC0060AD	TUC0060AD
TUC0235AD		235 (45+60+60+70)	94	801,700	62.3	3.77	TUC0045AD	TUC0060AD	TUC0060AD	TUC0070AD
TUC0240AD		240 (60+60+60+60)	96	818,800	62.6	3.83	TUC0060AD	TUC0060AD	TUC0060AD	TUC0060AD
TUC0245AD		245 (45+60+70+70)	98	835,800	66.4	3.69	TUC0045AD	TUC0060AD	TUC0070AD	TUC0070AD
TUC0250AD		250 (60+60+60+70)	100	852,900	66.7	3.75	TUC0060AD	TUC0060AD	TUC0060AD	TUC0070AD
TUC0255AD		255 (45+70+70+70)	102	869,900	70.4	3.62	TUC0045AD	TUC0070AD	TUC0070AD	TUC0070AD
TUC0260AD		260 (60+60+70+70)	104	887,000	70.8	3.67	TUC0060AD	TUC0060AD	TUC0070AD	TUC0070AD
TUC0265AD		265 (60+65+70+70)	106	904,100	72.0	3.68	TUC0060AD	TUC0065AD	TUC0070AD	TUC0070AD
TUC0270AD		270 (60+70+70+70)	108	921,100	74.9	3.60	TUC0060AD	TUC0070AD	TUC0070AD	TUC0070AD
TUC0275AD		275 (65+70+70+70)	110	938,200	76.1	3.62	TUC0065AD	TUC0070AD	TUC0070AD	TUC0070AD
TUC0280AD		280 (70+70+70+70)	112	955,200	79.0	3.54	TUC0070AD	TUC0070AD	TUC0070AD	TUC0070AD

Indoor units

Four-Way Cassette

- **360° Round flow design**
  360° surrounding air supply brings comfortable environment, more capacity selection, multiple mode switching and convenient installation, airflow is more even with 360° outlet wind.

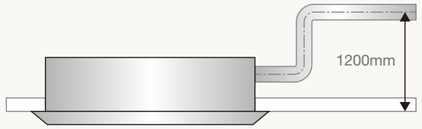
- **New 3D Turbo Fan**
  - New 3D turbo fan decreases air resistance, so it makes high efficiency and reduces noise level.
  - Same air volume, Noise reduce >0.5db(A).
  - Same speed air flow up ~5%.

- **Reduced energy consumption thanks to specially developed DC fan motor and drain pump**

- **Built-in lift pump with 1200mm pump head fitted for higher installation freedom**
  Built-in lift pump with a lift 1200mm helps to save drainage pipe space, especially suitable for suspended ceiling bring more freedom to installation.

- **Fresh air intake**
  Leave a fresh air interface to allow fresh air intake, enjoy more comfortable indoor environment.

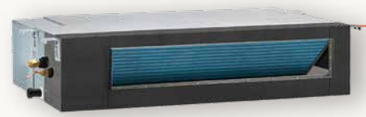
- **Provide PM2.5 Filter and Negative ion generator optional**
  User can choose PM2.5 filter and negative ion generator accessories, enjoy high-quality air.



Model			MUC028BP	MUC036BP	MUC045BP	MUC056BP	MUC071BP	MUC080BP	MUC090BP	MUC100BP	MUC112BP	MUC140BP	MUC160BP
Cooling capacity		kW	2.8	3.6	4.5	5.6	7.1	8	9	10	11.2	14	16
		Btu/h	9,600	12,300	15,400	19,100	24,200	27,300	30,700	34,100	38,200	48,000	55,000
Electrical characteristic	Power supply		220V/1Phase/50Hz/60Hz										
	Running current	A	0.23	0.23	0.25	0.35	0.32	0.33	0.38	0.53	0.65	0.90	1.00
	Power consumption	W	22	22	24	24	31	33	40	58	70	100	110
Dimensions	Body unit (HxWxD)	mm	840 x 840 x 244								840 x 840 x 288		
	Ceiling panel (HxWxD)	mm	950 x 950 x 80										
Net weight	Body unit	kg	20.5				25.0				27.5		
	Ceiling panel	kg	6.5										
Fan unit	Fan type		Single inlet centrifugal fan										
	Standard Airflow (HH/H/M/L/LL)	m^3/h	760/720/640/560/520		820/760/660/590/540		1090/880/740/590/540	1190/920/790/660/590	1350/1060/890/740/620	1500/1250/1060/870/740	1710/1400/1200/960/770	2050/1780/1500/1220/960	2240/1860/1580/1300/1080
		cfm	447/424/376/329/306		482/447/388/347/317		641/518/435/347/318	700/514/465/388/347	794/624/524/435/365	882/735/624/512/435	1006/824/706/565/453	1206/1047/882/718/565	1318/1094/929/765/635
Sound Pressure Level	HH/H/M/L/LL	dB(A)	31/29/27/24/22		32/31/28/26/22		38/35/30/26/22	39/35/31/27/24	41/38/34/29/25	45/42/38/33/30	45/42/38/33/28	48/46/42/36/33	49/47/44/38/35
Connecting pipe	Gas side	mm	ø 12.7				ø 15.9						
	Liquid side	mm	ø 6.4				ø 9.5						
	Drain port	mm	ø 25 (Polyvinyl chloride tube)										

Notes:
1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level diference.
2. The dimension is only the body size, excluding the size of the installation lug, connecting copper pie, etc. For detailed dimensions, please refer to the installation manual.

Mid ESP Duct

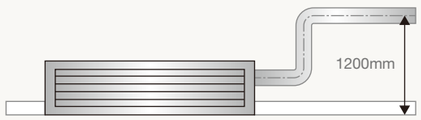


- **Slimmest unit in class, only 245 mm and therefore narrow ceiling voids are no longer a challenge.**

- **Medium external static pressure up to 100Pa facilitates using flexible ducts of varying lengths.**

- **Fresh air intake.**
  Leave a fresh air interface to allow fresh air intake, enjoy more comfortable indoor environment.

- **(Option) Built-in lift pump with 1200 mm pump head fitted for higher installation freedom.**
  Built-in lift pump with a lift 1200 mm helps to save drainage pipe space, especially suitable for suspended ceiling bring more freedom to installation.



Model			MUD028AM	MUD036AM	MUD045AM	MUD056AM	MUD071AM	MUD080AM	MUD090AM	MUD100AM	MUD112AM	MUD140AM	MUD160AM
Cooling capacity		kW	2.8	3.6	4.5	5.6	7.1	8	9	10	11.2	14	16
		Btu/h	9,600	12,300	15,400	19,100	24,200	27,300	30,700	34,100	38,200	48,000	55,000
Electrical characteristic	Power supply		220V/1Phase/50Hz/60Hz										
	Running current	A	0.80					1.30			1.40		1.50
	Power consumption	W	163					267			295		305
Dimensions	Body Unit (HxWxD)	mm	255 x 990 x 560					255 x 1270 x 560			255 x 1370 x 560		
Net weight	Body unit	kg	27	27	28	28	28	45	45	45	54	54	54
Fan unit	Fan type		Centrifugal sirocco fan										
	Standard Airflow (HH/H/M/L)	m^3/h	1050/870/690/670				1500/1130/1030/920				1920/1500/1180/990		1970/1540/1440/1320
		cfm	618/512/406/394				882/665/606/541				1129/882/694/582		1159/906/847/776
	External static pressure (Factory Setting)	Pa	30(80)					40(80)			50(100)		
Sound Pressure Level	HH/H/M/L	dB(A)	47/42/39/39				52/44/42/39				51/46/43/43		54/51/46/43
Connecting pipe	Gas side	mm	ø 12.7				ø 15.9						
	Liquid side	mm	ø 6.4				ø 9.5						
	Drain port	mm	ø 25 (Polyvinyl chloride tube)										

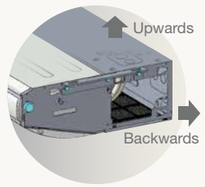
Notes:
1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level diference.
2. The dimension is only the body size, excluding the size of the installation lug, connecting copper pie, etc. For detailed dimensions, please refer to the installation manual.

Indoor units

Ceiling Floor

- **A sleek design suits installation either on the ceiling or floor, providing flexibility to accommodate a wide range of room designs**
- **Two thermistors control**
  The indoor temperature can be checked using the thermistor in the wired controller as well as from the indoor unit.
- **Long air supply distance up to 15m**
- **Reduced energy consumption thanks to specially developed DC fan motor**
- **Provide Healthy Filter and optional**
  User can choose PM2.5 filter and negative ion generator accessories, enjoy high-quality air.
- **Can easily be installed in both new and refurbishment projects**
- **Easy for wire Connection**
  Don't need to disassemble control box (Hand can reach the connection port and can use screw driver to fix the screws of communication and power wire).

- **Fresh air intake**
  - Leave a fresh air interface to allow fresh air intake, enjoy more comfortable indoor environment.
- **Two Directions of Piping**
  Have two directions of piping (upwards and backwards).



Model			MUZ036BP	MUZ045BP	MUZ056BP	MUZ071BP	MUZ080BP	MUZ090BP	MUZ100BP	MUZ112BP	MUZ140BP	MUZ160BP
Cooling capacity		kW	36	4.5	5.6	7.1	8	9	10	11.2	14	16
		Btu/h	12,300	15,400	19,100	24,200	27,300	30,700	34,100	38,200	48,000	55,000
Electrical characteristic	Power supply		220V/1Phase/50Hz/60Hz									
	Running current	A	0.30	0.35	0.40	0.60	0.50	0.65	0.75	0.85	1.05	1.45
	Power consumption	W	35	40	45	70	60	75	85	95	120	160
Dimensions	Body unit (HxWxD)	mm	245 x 1050 x 680				245 x 1350 x 680				245 x 1650 x 680	
Net weight		kg	28.5			29.5	36.0				43.0	
Fan unit	Fan type		Centrifugal sirocco fan									
	Standard Airflow (HH/H/M/L/LL)	m^3/h	960/800/650/550/450	1020/850/700/550/500	1140/900/800/650/550	1300/1050/900/800/700	1300/1100/900/700/600	1400/1200/1000/750/650	1460/1250/1050/850/750	1620/1400/1200/950/850	2300/2000/1650/1350/1200	2400/2150/1800/1500/1300
		cfm	565/471/382/218/265	600/500/412/324/294	671/529/471/382/324	765/618/529/471/412	765/647/529/412/353	824/706/588/441/382	859/735/618/500/441	953/824/706/559/500	1353/1176/971/794/706	1412/1264/1059/882/765
Sound pressure level	HH/H/M/L/LL	dB(A)	37/35/32/27/25	39/37/33/29/26	41/39/35/31/29	44/42/39/35/33	38/36/31/25/21	40/38/33/27/24	41/39/34/29/26	43/41/37/32/29	45/43/39/34/31	47/45/41/35/32
Connecting pipe	Gas side	mm	ø 12.7			ø 15.9						
	Liquis side	mm	ø 6.4			ø 9.5						
	Drain port	mm	ø 25 (Polyvinyl chloride tube)									

Notes:
1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level diference.
2. The dimension is only the body size, excluding the size of the installation lug, connecting copper pie, etc. For detailed dimensions, please refer to the installation manual.

High ESP Duct

- **The static pressure can reach 250Pa, so the air supply distance is longer**
  Especially in long and narrow spaces such as corridors, it can reduce the number of units used and save investment costs.
- **Built-in with EXV**
- **High airflow up to 10100 CMH**
- **AC motor with belt driver**
  Standard ESP is set at 50 Pa from factory and can be adjusted to meet actual duct length if specify by customer when ordering.

Model			MUD180AD	MUD220AD	MUD280AD	MUD350AD	MUD450AD	MUD560AD	MUE450AD
Cooling Capacity		kW	18	22	28	35	45	56	45
		Btu/h	61,400	75,100	95,500	120,000	153,500	191,100	153,500
Electrical Characteristic	Power Supply		380V/3Phase/50Hz						
	Running Current	A	1.61	1.99	2.15	2.73	3.03	5.05	3.03
	Power Consumption	W	730	830	850	1100	1500	2000	1500
Dimensions	Body Unit (HxWxD)	mm	520 x 1406 x 916		521x 1833 x 926		798 x 2088 x 1260		1751 x 1649 x 876
Net Weight		kg	90	95	138	145	175	181	275
Fan Unit	Fan Type		Centrifugal Fan Forward Curve Wheel						
	Standard Airflow	m^3/h	3400	4250	5770	6800	8500	10200	8500
		cfm	2000	2500	3400	4000	5000	6000	5000
	Air Flow Direction		Horizontal Discharge						Verical Discharge
	External static pressure (factory setting)	Pa	50 (25-250)						
Sound Pressure Level		dB(A)	50	50	54	55	57	59	70
Connecting pipe	Gas Side	mm	ø 22.2		ø 25.4	ø 28.6	ø 34.9		
	Liquid Side	mm	ø 9.5		ø 12.7		ø 15.9		
	Drain Port	mm	ø 25.4 (Steel pipe-MPT)						

Notes:
1. Normal capacities are based on the following conditions. Cooling indoor temperature 27 ℃ DB, 19 ℃ WB, outdoor temperature 35 ℃ DB, pipe lenth 7.5 m, with zero level difference.
2. The dimensions is only the body size, excluding he size of the installation leg, connecting copper pipe, etc. For detailed dimensions, please refer to the installation manual.

Indoor units

Wall Mounted

- **Widely use**
  Wall-mounted ID is widely used in restaurants, study rooms, hotel clubs and other places to provide customers with a comfortable working and living environment.

- **Low operation noise**
  Ultra-low and quiet operation, using large blade wind wheels, the lowest noise is only 22 dBA.

- **Slim design**
  Ultra slim body design with only 194 mm height, perfect for interior.

Model			MUW022BP	MUW028BP	MUW036BP	MUW045BP	MUW056BP	MUW071BP	MUW080BP	MUW090BP	MUW100BP	MUW112BP
Cooling Capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	10.0	11.0
		Btu/h	7,500	9,600	12,300	15,400	19,100	24,200	27,300	30,700	34,100	37,500
Electrical Characteristic	Power Supply		220V/1Phase/50Hz									
	Running Current	A	0.1		0.12	0.18		0.23	0.24	0.47		
	Power Consumption	W	16		20	30		40	42	82		
Dimensions	Body Unit (HxWxD)	mm	294 x 881 x 194			316 x 997 x 227		330 x 1132 x 232		270 x 1460 x 375		
Net Weight		kg	10.5			13.5		15.5		23		
Fan Unit	Fan Type		Cross Flow Fan									
	Standard Airflow (HH/H/M/L/LL)	m^3/h	570/490/360/230/170		650/560/420/280/200	840/740/580/420/330	970/850/650/450/350	1150/1030/820/620/520	1200/1070/850/630/520	1640/1400/1020/630/430	1650/1430/1050/680/490	1700/1480/1120/760/580
		cfm	335/282/212/135/100		382/329/247/165/118	494/435/341/247/194	571/500/382/265/206	676/606/482/365/306	706/629/500/371/306	965/824/600/370/253	970/840/618/400/288	1000/870/659/447/340
Sound Pressure Level	HH/H/M/L	dB(A)	37/33/29/24/22		41/36/31/26/24	38/35/30/27/25	42/38/32/27/25	42/38/34/30/28	42/39/35/30/28	45/42/38/32/28	46/43/38/33/30	46/43/38/33/30
Connecting Pipe	Gas Side	mm	ø 9.5			ø 12.7		ø 15.9				
	Liquid Side	mm	ø 6.4							ø 9.5		
	Drain Port	mm	DN 20									

Notes :
1. Normal capacities are based on the following conditions. Cooling indoor temperature 27 ℃ DB, 19 ℃ WB, outdoor temperature 35 ℃ DB, pipe length 7.5 m, with zero level difference.
2. The dimensions is only the body size, excluding the size of the installation leg, connecting copper pipe, etc. For detailed dimensions please refer to the installation manual.

Mid ESP Duct

- **Elegant with minimal design**
  Provide coolness while helping decorate your room with elegant look.

- **One-Directional Airflow**
  Suit with rectangular shape room with long air throw.

- **Less installation space**
  With its height only 250 mm requires less ceiling space make it more easier to be installed in the ceiling.

- **Built-in lift pump**
  Built-in lift pump helps to save draining pipe space, especially suitable for suspended-ceiling provide more freedom for installation.

- **Low noise operation**
  Provide coolness while helping decorate your room with elegant look.

Model			MUA022AM	MUA028AM	MUA036AM	MUA045AM	MUA056AM	MUA071AM	MUA080AM	MUA090AM	MUA100AM	MUA112AM	MUA140AM	MUA160AM
Cooling Capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	10.0	11.2	14.0	16.0
		Btu/h	7,500	9,600	12,300	15,400	19,100	24,200	27,300	30,700	34,100	38,200	48,000	55,000
Electrical Characteristic	Power Supply		220V/1Phase/50Hz											
	Running Current	A	0.41					0.7		0.84				
	Power Consumption	W	45					76		92				
Dimensions	Body Unit (HxWxD)	mm	612 x 955 x 251					612 x 1255 x 251		612 x 1555 x 251				
	Panel (HxWxD)	mm	710 x 1283 x 10					710 x 1583 x 50		710 x 1883 x 50				
Net Weight	Body Unit	kg	40					45		52		58		
	Panel	kg	6					7		8				
Fan Unit	Fan Type		Centrifugal Sirocco Fan											
	Standard Airflow (HH/H/M/L/LL)	m^3/h	870/740/620/500					1140/980/790/630		2780/2380/2090/1690				
		cfm	512/436/365/294					670/577/465/370		1635/1400/1230/995				
Sound Pressure Level	HH/H/M/L	dB(A)	46/42/38/34					48/46/40/36		50/48/44/40				
Connecting Pipe	Gas Side	mm	ø 12.7					ø 15.9						
	Liquid Side	mm	ø 6.4							ø 9.5				
	Drain Port	mm	ø 19 (Polyvinyl Chloride Tube)											

Notes :
1. Normal capacities are based on the following conditions. Cooling indoor temperature 27 ℃ DB, 19 ℃ WB, outdoor temperature 35 ℃ DB, pipe length 7.5 m, with zero level difference.
2. The dimensions is only the body size, excluding the size of the installation leg, connecting copper pipe, etc. For detailed dimensions please refer to the installation manual.

Indoor units

Floor Standing

- **Built-in with Silent EXV**
- **Easy installation**
- **Washable Filter**
- **High air volume and low noise**
- **Serviceability**
  The unit can be easily serviced and minimum area required just only at the front after panel.
- **Galvanized steel with a powder paint finish for corrosion resistance**

	Model		MUV112AM	MUV140AM	MUV175AM	MUV250AM	MUV350AM
Cooling Capacity		kW	11.2	14	17.5	25	35
		Btu/h	38,200	48,000	60,000	85,300	120,000
Electrical Characteristic	Power Supply		220V/1Phase/50Hz/60Hz				
	Running Current	A	1.11	1.92	2	2.22	3.84
	Power Consumption	W	122	211	220	244	422
Dimensions	Body Unit (HxWxD)	mm	1900 x 600 x 370		1900 x 848 x 400	1900 x 1196 x 400	
Net Weight		kg	64.2	67.7	89.8	136.3	143.3
Fan Unit	Fan Type				Centrifugal Sirocco Fan		
	Standard Airflow (HH/H/M/L)	m³/h	2100/1700/1400/1240	-/2040/1730/1420	2860/2380/2290/2100	4020/3400/2790/2480	-/4080/3460/2830
		cfm	1190/1000/830/730	-/1200/1020/840	1690/1400/1350/1240	2370/2000/1650/1460	-/2400/2040/1670
Sound Pressure Level	HH/H/M/L	dB(A)	50/46/42/38	-/50/46/42	52/48/48/46	56/52/48/44	-/56/52/48
Connecting pipe	Gas Side	mm	ø 19	ø 22	ø 28.6		
	Liquid Side	mm	ø 9.5	ø 12.7	ø 12.7		
	Drain Port	mm	R3/4in (DN20)				

Notes :
1. Indoor temperature 27℃ DB, 19℃ WB; outdoor temperature 35℃ DB; equivalent refregerant piping length 7.5 m. with zero level difference.
2. The dimensions is only the body size, excluding the size of the installation leg, connecting copper pipe, etc. For detailed dimensions, please refer to the installation manual.

Slim Duct

- **External static pressure: 0~50Pa**
- **Low Noise**
  IDU adopts DC variable frequency brushless motor (BLDC), and the running sound is as low as 18dB(A), which is silent and does not disturb sleep.
- **Built-in with Silent EXV**
- **Build in water DC pump lift high to 1200mm (Optional)**

Model			MUD022BP	MUD025BP	MUD028BP	MUD032BP	MUD036BP	MUD040BP	MUD045BP	MUD050BP	MUD056BP	MUD063BP	MUD071BP
Cooling Capacity		kW	2.2	2.5	2.8	3.2	3.6	4	4.5	5	5.6	6.3	7.1
		Btu/h	7,500	8,500	9,600	10,900	12,300	13,600	15,400	17,000	19,100	21,400	24,200
Electrical Characteristic	Power Supply		220V/1Phase/50Hz/60Hz										
	Running Current	A	0.12			0.18			0.2			0.29	
	Power Consumption	W	20			30			34			51	
Dimensions	Body Unit (HxWxD)	mm	200 x 700 x 450						200 x 900 x 450			200 x 1100 x 450	
Net Weight	Body Unit	kg	16			17			21			24	
Fan Unit	Fan Type		Centrifugal Sirocco Fan										
	Standard Airflow (HH/H/M/L)	m³/h	670/610/500/400/340			740/690/600/510/450		800/730/620 /510/490	910/840/720 /600/530	940/870/750 /630/560	1000/920/ 790/650/570	1360/1260/1100/940/850	
		cfm	400/360/300/240/200			440/410/360/300/270		480/430/370 /300/290	540/500/430 /360/320	560/520/450 /380/330	590/550/470 /390/340	800/750/650/560/500	
	External Static Pressure (Factory Setting)	Pa	12(0~50)										
Sound Pressure Level	HH/H/M/L/LL	dB(A)	30/28/26/22/18			34/32/30/26/24		35/33/31/ 26/25	36/34/32/28/24			38/36/34/30/28	
Connecting Pipe	Gas Side	mm	ø 12.7									ø 15.9	
	Liquid Side	mm	ø 6.4									ø 9.5	
	Drain Port	mm	ø 25 (Polyvinyl Chloride Tube)										

Notes :
1. Indoor temperature 27℃ DB, 19℃ WB; outdoor temperature 35℃ DB; equivalent refregerant piping length 7.5 m. with zero level difference.
2. The dimensions is only the body size, excluding the size of the installation leg, connecting copper pipe, etc. For detailed dimensions, please refer to the installation manual.

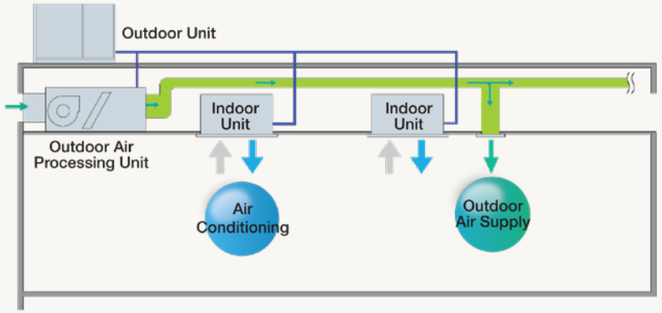
Indoor units

Fresh Air Processing Unit

- **100% Fresh Air Processing Unit**
- **Discharge Air Temperature Control**
  The Fresh Air Unit adopts target discharge air temperature control instead of normal return air temperature, so it does not increase cooling load to the room.
- **Better Air Quality**
  Unit can be provided with optional higher grade pre-filter and medium filters to sieved out both large and small size dust before entering to the room.

Model			MUF125AD	MUF140AD	MUF160AD	MUF180AD	MUF220AD	MUF250AD	MUF280AD	MUF450AD	MUF560AD
Cooling Capacity		kW	12.5	14	16	18	22	25	28	45	56
		Btu/h	42,700	48,000	55,000	61,400	75,100	85,300	95,500	153,500	191,100
Electrical Characteristic	Power Supply		380V/3Phase/50Hz/60Hz								
	Running Current	A	1.5				3.53			5.16	
	Power Consumption	W	550				1500			2200	
Dimensions	H x W x D	mm	521 x 1465 x 916				521 x 1833 x 916			798 x 2059 x 1260	
Net Weight	Body unit	kg	90				138			181	
Fan Unit	Fan Type		Double Inlet Centrifugal Fan Forward Curve Wheel								
	Standard Airflow	m^3/h	1100	1100	1300	1700	2500	3000	3750	4700	6300
		cfm	650	650	770	1000	1470	1770	2210	2770	3710
	Airflow Direction		Horizontal Discharge								
	External static pressure (Factory Setting)	Pa	150 (100-250)				200 (150-300)			300 (150-350)	
Sound Pressure Level		dB(A)	51				54			60	
Connecting Pipe	Gas Side	mm	ø 15.9				ø 25.4			ø 34.9	
	Liquid Side	mm	ø 9.5				ø 12.7				
	Drain Port	mm	ø 32 (Steel Pipe-MPT)								

Notes :
1. Normal capacities are based on the following conditions. Outdoor temperature 35 ℃ DB, pipe length 7.5 m, with zero level difference.
2. The dimensions is only the body size, excluding the size of the installation leg, connecting copper pipe, etc. For detailed dimensions please refer to the installation manual.

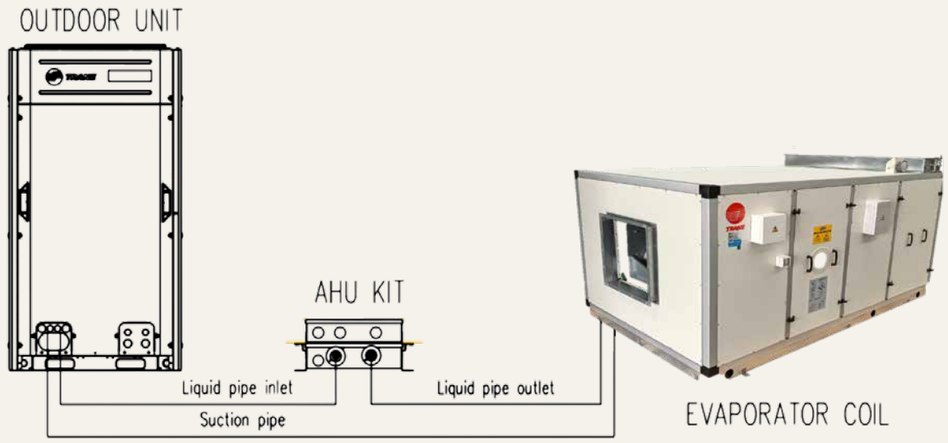


Indoor units

AHU Solutions

- Extended cooling capacity to match with specific requirement for large area with duct work.
- AHU kit is used to connect Gen Elite VRF ODU with either single skin or double skin AHU.
- Maximum cooling capcity of 260 kW (887,100 Btu/h) AHU can be matched with VRF ODU.
- Single skin AHU TTV can serve for general use of duct work for commercial building, auditorium, etc.
- Double skin AHU CLCA is used for special application, for example, factory, hospital, laboratory.
- AHU kits are available in three individual capacities as shown below.

Model Name		Evaporator Coil Capacity Range	
EEV KIT	PCBA KIT	Min	Max
362-59067-ACC	362-58990-ACC	10.0 kw	22.4 kw
362-59068-ACC	362-58990-ACC	22.4 kw	45.0 kw
362-59069-ACC	362-58990-ACC	45.0 kw	65.0 kw



Control systems

Wired Remote controller

TM-BE0 is a touch button product with rich settings and query functions, it can achieve one-to-one, one to many, and many to many control with indoor units.

- Mode setting
- Fan speed
- Temperature setting
- Clock
- Status display
- Parameter setting and checking
- Infrared reception control

Wired Remote controller

Operation buttons:

- mode setting
- Fan speed setting
- Temperature setting
- Sweep
- ECO
- Turbo
- Sleep
- Timer
- Battery level reminder

Centralized controller

Providing individual control of 4 groups (zones) of indoor units.

- A maximum of 4 groups (256 indoor units, max. 4 outdoor units) can be controlled
- On/Off setting
- Fan speed/direction setting
- Temperature setting
- Group setting/control
- System Status/Alarm display
- Device Parameter setting
- Schedule setting
- Energy saving setting
- Date & Time display