



SYNERGY

Inverter 

Split System 6.25-20 Tons
Light Commercial Inverter System
TYH/MYV/TYE/CLCP/TYA R410A Series 50Hz

www.bbair.co.th

TRANE
TECHNOLOGIES



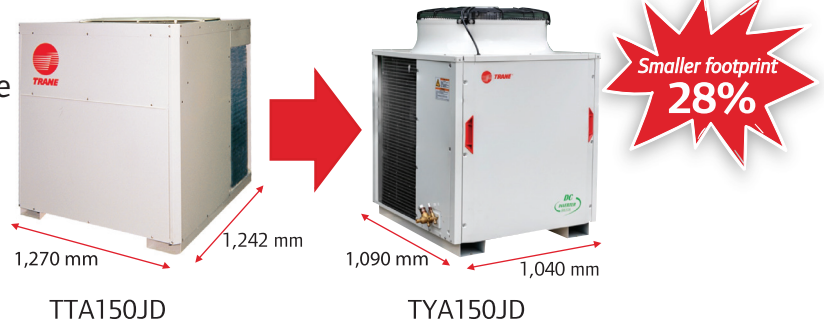


Light Commercial Inverter System

- The introduction of DC Inverter compressor driven by the most advanced control technology is designed to provide more precise operation and improved system efficiency to reach maximum SEER 12.7 (averagely improved 25% from Fixed speed type). The compressor speed is adapted to match the fluctuating cooling load of the buildings while ensuring the appropriate variable supply of cooling.

Space saving with Smaller Footprint

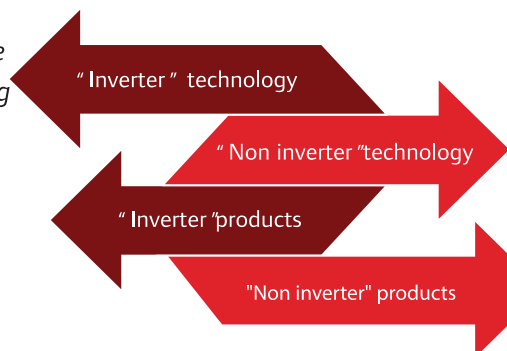
- Trane Synergy Inverter is designed for smaller condensing unit dimensions to save the installation space at maximum of 28% from current product.



DC Compressor Inverter

An inverter air conditioner with variable speed compressor, the speed and tonnage can be adjustable according to the cooling demand and load on the air conditioner.

More comfortable, energy saving ect.



Non inverter air conditioner with constant speed compressor and fan, the temperature is adjusted by turning the motor ON and OFF, which consumes more energy.

Simple, will stop and turn off once the room temperature falls to the desired level.

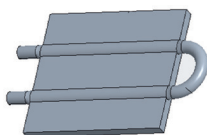


- DC inverter
- High energy efficiency
- High reliability
- Low noise / vibration

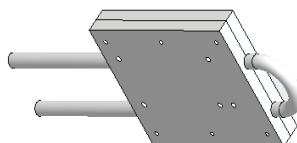
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High Reliability with New Refrigerant Cooled PCB Technology

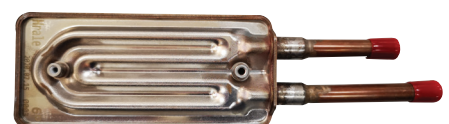
- New full Package for top discharge and Micro Channel Radiator for side discharge design to enhance heat transfer and decrease temperature by 15 °C.



Old : Crimping



New for Top : Full Package



New for Side : Micro Channel Radiator

Easy service and maintenance

- Self-Diagnostic system shows error codes for the causes of malfunction which help reduce service time.

Completed DOL Standard and Controller

- Factory completed build-in DOL starter and digital wired controller.



Digital Wired Controller
(Standard)



Remote Control (Option)

TYH Air Handling Unit

- For horizontal air discharge.
- Powder paint finished casing.
- Belt drive.
- Electronic Expansion Valve.
- Factory installed PCB, DOL starter and display wired controller.
- Suitable for ducted application (Fan motor hp output will be specially selected to properly match with Free blow application.)



TYH075JD



TYH100-240JD

TYA Condensing Unit

- Powder paint finished casing.
- External current overload for compressor.
- Temperature protection.
- Under and Over voltage protection.
- Fully charged R410A refrigerant with shut-off valve.
- Hi/Low pressure.
- Phase protection.
- Cooled PCB.



TYA075-200JD
(1FAN)



TYA240JD
(2FAN)

Digital Wired Control Standard

- The control panel of wire controller is responsible for controlling the operation status of the system by the button and displaying the working status of the entire system by its LCD screen, and is responsible for communicating with the control board of the system.



Display Wired Controller



Remote Control (Option)



LCD SCREEN



TURBO
MODE



FAULT
DISPLAY



CHILD
LOCKED
MODE



DAILYTIMER
ON-OFF



WIRELESS
REMOTE
(OPTION)

Technique Index

- Temperature sensor: NTC.
- Temperature set range: 16-30 °C.
- Compressor status.
- Signal Wire: Sheathed twisted pair cable, 24AWG.
- Size: 96.7×95.7×41.3 mm. (Width × High × Thick).

Remote Control (Option)

- Wireless remote.
- Radiation distance: ≤ 10 meters.
- Temperature set range: 16-30 °C.

Weekly Schedule Wired Controller TM-ATOBR (Optional)

- The control panel of wire controller is responsible for controlling the operation status of the system by the button and displaying the working status of the entire system by its LCD screen and is responsible for communicating with the control board of the system.
- Weekly schedule wired controller is applied to industrial, commercial, and family room temperature control.



LCD Display



User Interface



LCD LARGE
SCREEN



TOUCH
BUTTON



IP20



TIMER AND
WEEKLY



BUTTON
LOCKED MODE



FAULT DISPLAY

Technique Index

- Temperature sensor: NTC.
- Temperature display precision: ±0.5 °C.
- Temperature set range: 16-30 °C.
- Working environment: 0-50 °C.
- IP Level: IP20.

- Signal Wire: Sheathed twisted pair cable, 24AWG.
- Size: 86×86×41.3 mm. (Width × High × Thick).

Touch Screen Centralized Control System (Optional)

- Touch screen centralized control system is the centralized management system of synergy system.
- For unit system, it can provide group configuration, schedule management, user operation, energy saving control and other functions.
- 7 inch Touch Screen Panel.



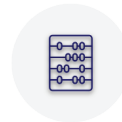
Touch Panel F007



COMPACT
STRUCTURE



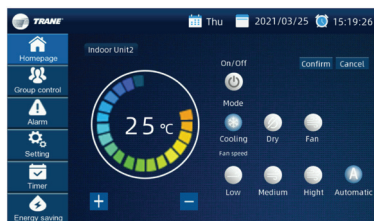
USER-FRIENDLY
INTERFACE



ALL UNITS
CONTROL



GROUP DEVICE
CONTROL



User Interface



TIMER AND
SCHEDULE



ENERGY
SAVING MODE

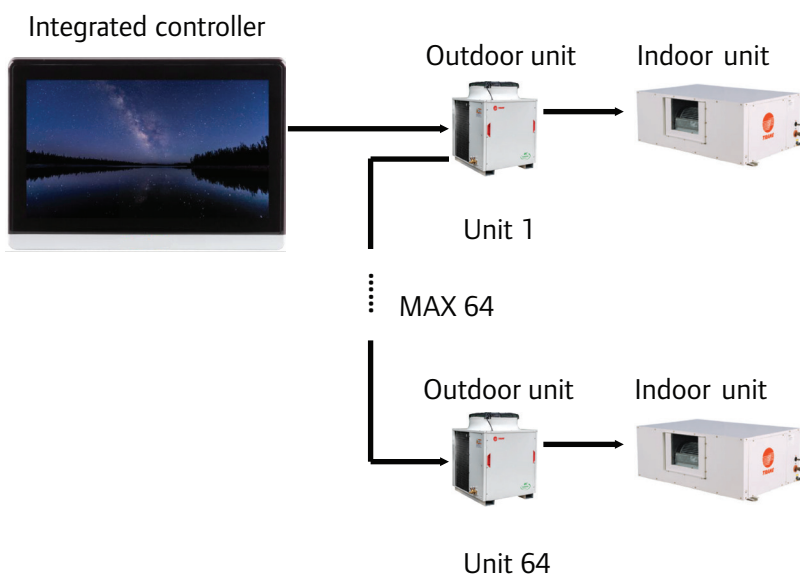


ALARM

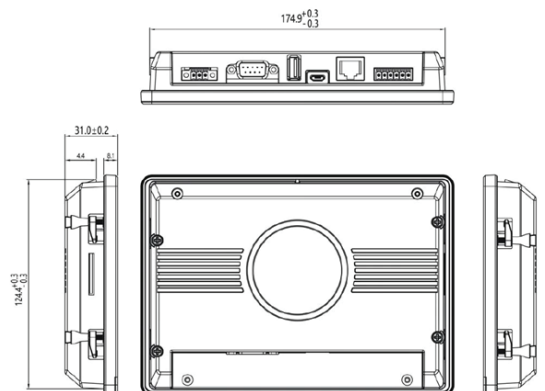


SYSTEM
DIAGNOSING

- Uses RS-485 network form, the structure is simple, the wiring is convenient and fast.
- Centralized touch screen, can control up to 64 sets.
- The longest transmission distance can reach 1,000 meters.



Product Dimension



MYV Tall Floor Model

- New compact design that fits well for a variety of usages.
- Offers a silent operation with the Single Inlet Centrifugal Fan
- The front unit can be opened, making it easy for maintenance to be carried out without any space constraints.



TYE Air Handling Unit (Single skin)

- Vertical discharge.
- Forward curved centrifugal type evaporator fan(s) with fixed belt drive.
- Suitable for ducted application (Fan motor hp output will be specially selected to properly match with Free blow application.)



CLCP Air Handling Unit (Double skin)

- Customizable for air discharge.
- Belt drive.
- High Static Pressure.
- Suitable for ducted application (Fan motor hp output will be specially selected to properly match with application.)



TYA150JD-TYA200JD



TYA240JD

TYA Condensing Unit

- External current overload for compressor.
- Temperature protection.
- Under and Over voltage protection.
- Fully charged R410A refrigerant with shut-off valve.
- Hi/Low pressure.
- Phase protection.
- Cooled PCB.

System Performance Table

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Indoor model	Indoor motor (HP)	Outdoor model	Capacity (MBH)
MYV090	Direct drive motor	TYA 075JD	75
MYV090	Direct drive motor	TYA 100JD	100
MYV120	Direct drive motor	TYA 120JD	120
CLCP004	2	TYA 075JD	75
CLCP006	2	TYA 100JD	100
TYE120	2	TYA 120JD	120
TYE160	2	TYA 150JD	150
TYE210	3	TYA 200JD	200
TYE240	5.5	TYA 240JD	240
CLCP008	2	TYA 120JD	120
CLCP010	2	TYA 150JD	150
CLCP012	3	TYA 200JD	200
CLCP014	5.5	TYA 240JD	240

Product Specifications (TYH Model)

UNIT MODELS	Indoor unit		TYH075JD	TYH100JD	TYH120JD	TYH160JD	TYH200JD	TYH240JD
	Outdoor unit		TYA075JD	TYA100JD	TYA120JD	TYA150JD	TYA200JD	TYA240JD
Electrical Data	Power Supply	V/Ph/Hz	380-415/3/50					
Performance data	Cooling Capacity (Min-Max)	Btu/h	75,000 (35,000-80,000)	100,000 (40,000-100,000)	120,000 (48,000-120,000)	150,000 (60,000-150,000)	200,000 (80,000-200,000)	240,000 (96,000-240,000)
	SEER	Btu/h/W	11.6	12.36	12.73	11.51	11.55	12.07
	Nominal Airflow	CFM	2,500	3,400	4,000	5,300	7,000	8,000
System data	Refrigerant Type		R410A (Fully charged)					
	No. Refrigerant Circuits		1	1	1	1	1	1
	Refrigerant Connection Type		BRAZE	BRAZE	BRAZE	BRAZE	BRAZE	BRAZE
	Suction Line OD	in (mm)	7/8"	7/8"	1 1/8"	1 1/8"	1 3/8"	1 5/8"
	Liquid Line OD	in (mm)	3/8"	1/2"	1/2"	5/8"	5/8"	5/8"
	Drain Connection Size	in (mm)	1 (25.4)	1 (25.4)	1 (25.4)	1 (25.4)	1 (25.4)	1 (25.4)
	Drain Connection Type		Steel Pipe - MPT					
Indoor Units								
Flow control	Type		Electronics Expansion Valve					
Fan	Fan Type		Double Inlet Centrifugal with Forward Curved Wheel					
	Qty		1	2	2	2	2	2
	Drive Type		Belt - Drive					
Fan Motor	Output	Hp (kW)	1 (0.75)	2 (1.5)	2 (1.5)	2 (1.5)	3 (2.2)	5.5 (4.0)
	Qty x RLA		1.99	3.48	3.48	3.48	4.9	8.56
Filter	Type		1 - In Thickness Washable Aluminium					
Dimension (HxWxD)	Unit (Net)	mm	520x1,465x916	521x1,833x916	620x1,833x916	798x2,088x1,260	849x2,366x1,319	
Weight	Unit (Net)	kg	94	138	143	175	235	290
Outdoor Units								
Compressor	Type		Twin Rotary DC Inverter				Scroll DC Inverter	Twin Rotary DC Inverter
	Qty x RLA		17.5	22.5	27.5	37	41.5	2 x 27.5
Fan	Fan Type		Propeller					
	Qty		1	1	1	1	1	2
Fan Motor	Type		AC motor					
	Output	Watt	650	650	650	1050	1580	2 x 650
	Qty x RLA		1.5	1.5	1.5	2.1	3.1	2 x 1.5
Dimension (HxWxD)	Unit (Net)	mm	1,215x900x841		1,382x900x841	1,370x1,040x1,090		1,378x1,792x881
Weight	Unit (Net)	kg	140	141	152	175	200	290

Product Specifications (MYV/CLCP Model)

UNIT MODELS	Indoor unit		CLCP004	MYV090	CLCP006	MYV090	CLCP008	MYV120
	Outdoor unit		TYA75JD	TYA75JD	TYA100JD	TYA100JD	TYA120JD	TYA120JD
Electrical Data	Power Supply	V/Ph/Hz	380-415/3/50					
Performance data	Cooling Capacity	Btu/h	75,000	75,000	100,000	100,000	120,000	120,000
	Nominal Airflow	CFM	2,161	2,000	3,072	2,000	3,941	2,400
System data	Refrigerant Type		R410A					
	No. Refrigerant Circuits		1	1	1	1	1	1
	Refrigerant Connection Type		BRAZE	Sweat	BRAZE	Sweat	BRAZE	Sweat
	Suction Line OD	in (mm)	7/8"	7/8"	7/8"	7/8"	1-1/8"	1-1/8"
	Liquid Line OD	in (mm)	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"
Indoor Units								
Flow control	Type		Thermostatic Expansion Valve					
Fan	Fan Type		Forward Curved Centrifugal	Single Inlet Centrifugal	Forward Curved Centrifugal	Single Inlet Centrifugal	Forward Curved Centrifugal	Single Inlet Centrifugal
	Qty		1	2	1	2	1	2
	Drive Type		Direct drive	Direct drive	Belt - Drive	Direct drive	Belt - Drive	Direct drive
Fan Motor	Output	Watt	1,500	2 x 122	2,200	2 x 122	3,000	2 x 211
	Qty x RLA	Amp	-	2 x 1.78	-	2 x 1.78	-	2 x 2.34
Filter	Type		1 - In Thickness Washable Aluminium	Polypropylene	1 - In Thickness Washable Aluminium	Polypropylene	1 - In Thickness Washable Aluminium	Polypropylene
Dimension (HxWxD)	Unit (Net)	mm	868x1,058x1,368	1,900x1,196x400	868x1,368x1,368	1,900x1,196x400	868x1,678x1,368	1,900x1,196x400
Weight	Unit (Net)	kg	200	136.3	260	136.3	300	143.3
Outdoor Units								
Compressor	Type		Twin Rotary DC Inverter	Twin Rotary DC Inverter	Twin Rotary DC Inverter	Twin Rotary DC Inverter	Twin Rotary DC Inverter	Twin Rotary DC Inverter
	Qty x RLA		17.5	17.5	22.5	22.5	27.5	27.5
Fan	Fan Type		Propeller					
	Qty		1	1	1	1	1	1
Fan Motor	Type		AC motor					
	Output	Watt	650	650	650	650	650	650
	Qty x RLA		1.5	1.5	1.5	1.5	1.5	1.5
Dimension (HxWxD)	Unit (Net)	mm	1,215x900x841		1,215x900x841		1,382x900x841	
Weight	Unit (Net)	kg	140	140	141	141	152	152

Product Specifications (TYE/CLCLP Model)

UNIT MODELS	Indoor unit		TYE120	CLCP010	TYE160	CLCP012	TYE210	CLCP014	TYE240
	Outdoor unit		TYA120JD	TYA150JD	TYA150JD	TYA200JD	TYA200JD	TYA240JD	TYA240JD
Electrical Data	Power Supply	V/Ph/Hz	380-415/3/50						
Performance data	Cooling Capacity	Btu/h	120,000	150,000	150,000	200,000	200,000	240,000	240,000
	Nominal Airflow	CFM	4,000	4,873	5,300	6,271	7,000	7,669	8,000
System data	Refrigerant Type		R410A						
	No. Refrigerant Circuits		1	1	1	1	1	1	1
	Refrigerant Connection Type		BRAZE	BRAZE	BRAZE	BRAZE	BRAZE	BRAZE	BRAZE
	Suction Line OD	in (mm)	1-1/8"	1-1/8"	1-1/8"	1-3/8"	1-3/8"	1-3/8"	1-3/8"
	Liquid Line OD	in (mm)	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
	Drain Connection Size	in (mm)	1 (25.4)		1 (25.4)		1 (25.4)		
Drain Connection Type			Steel Pipe - MPT						
Indoor Units									
Flow control	Type		Thermostatic Expansion Valve						
Fan	Fan Type		Forward Curved Centrifugal	Forward Curved Centrifugal	Forward Curved Centrifugal	Forward Curved Centrifugal	Forward Curved Centrifugal	Forward Curved Centrifugal	Forward Curved Centrifugal
	Qty		1	1	1	1	2	1	2
	Drive Type		Belt - Drive	Belt - Drive	Belt - Drive	Belt - Drive	Belt - Drive	Belt - Drive	Belt - Drive
Fan Motor	Output	Watt	1,492	5,500	1,492	5,500	2,238	5,500	4,103
	Qty x RLA	Amp	3.67	-	4.90	-	4.90	-	8.56
Filter	Type		1 - In Thickness Washable Aluminium						
Dimension (HxWxD)	Unit (Net)	mm	1,523x1,410x635	1,178x1,368x1,523	1,751x1,613x850	1,178x1,678x1,523	1,751x2,210x702	1,178x1,988x1,523	1,751x2,210x702
Weight	Unit (Net)	kg	154	330	275	420	356	470	365
Outdoor Units									
Compressor	Type		Twin Rotary DC Inverter	Twin Rotary DC Inverter	Twin Rotary DC Inverter	Scroll DC Inverter	Scroll DC Inverter	Twin Rotary DC Inverter	Twin Rotary DC Inverter
	Qty x RLA		27.5	37	37	41.5	41.5	2 x 27.5	2 x 27.5
Fan	Fan Type		Propeller						
	Qty		1	1	1	1	1	2	2
Fan Motor	Type		AC motor						
	Output	Watt	650	1,050	1,050	1,580	1,580	2 x 650	2 x 650
	Qty x RLA		1.5	2.1	2.1	3.1	3.1	2 x 1.4	2 x 1.4
Dimension (HxWxD)	Unit (Net)	mm	1,382x900x841	1,370x1,040x1,090	1,370x1,040x1,090	1,370x1,040x1,090	1,370x1,040x1,090	1,378x1,792x881	1,378x1,792x881
Weight	Unit (Net)	kg	152	175	175	200	200	290	290

- Note:
1. Capacity is rated at AR conditions of 80° / 67° FDB/FWB for Indoor & 95° FDB for Outdoor.
 2. Outdoor unit dimensions depth is not included the dimensions of unit's legs.
 3. Product design and specification are subject to change without notice.
 4. The actual sizing of CLCP model is depends on the design airflow cfm.



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