



Inverter
SYNERGY 

Split System 6.25-20 Tons

Light Commercial Inverter System

TYH/MYV/TYE/CLCP/TYA R410A Series 50Hz

TRANE
TECHNOLOGIES



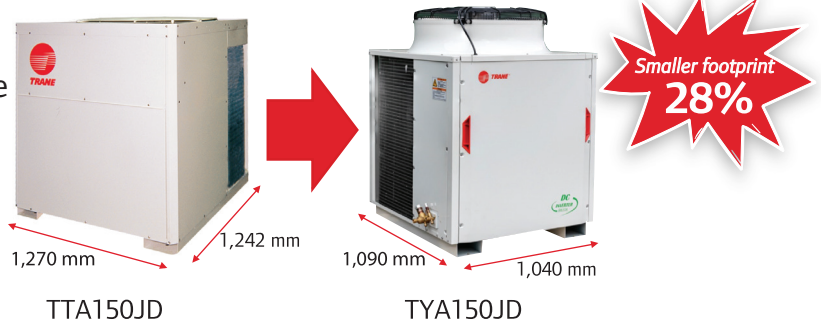


Light Commercial Inverter System

- 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

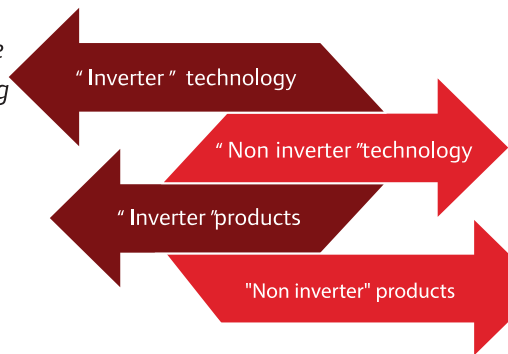
- Trane Synergy Inverter is designed for smaller condensing unit dimensions to save the installation space at maximum of 28% from current product.



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.

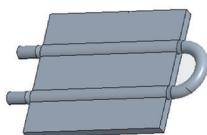
Simple, will stop and turn off once the room temperature falls to the desired level.



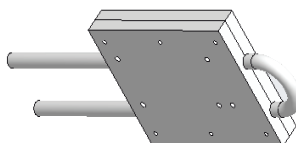
- DC inverter
- High energy efficiency
- High reliability
- Low noise / vibration

High Reliability with New Refrigerant Cooled PCB Technology

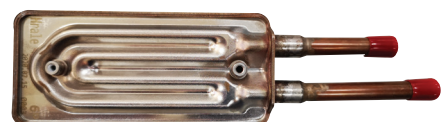
- New full Package for top discharge and Micro Channel Radiator for side discharge design to enhance heat transfer and decrease temperature by 15 °C.



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.
- Power 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



DAILY TIMER 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.



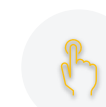
LCD Display



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.



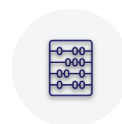
Touch Panel F007



COMPACT
STRUCTURE



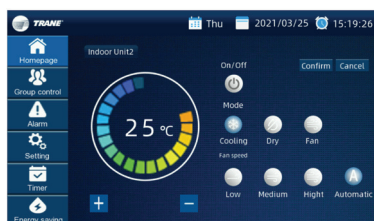
USER-FRIENDLY
INTERFACE



ALL UNITS
CONTROL



GROUP DEVICE
CONTROL



User Interface



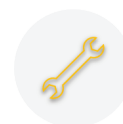
TIMER AND
SCHEDULE



ENERGY
SAVING MODE

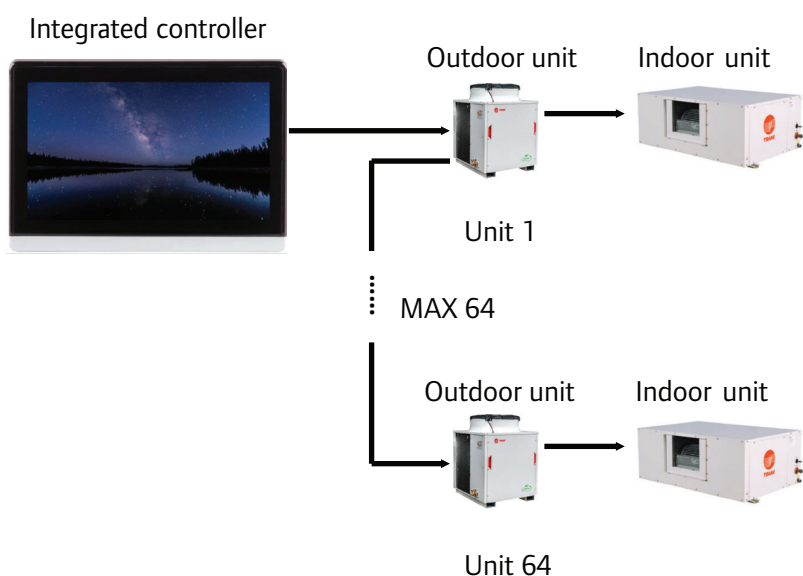


ALARM

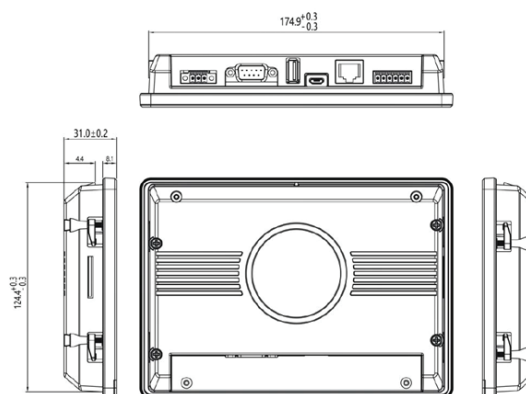


SYSTEM
DIAGNOSING

- 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

| 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 | 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 FLA | | 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 FLA | | 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 FLA | | 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 FLA | 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 FLA | | 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 FLA | | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Dimension (HxWxD) | Unit (Net) | mm | 1,215x900x841 | 1,215x900x841 | 1,215x900x841 | 1,215x900x841 | 1,382x900x841 | 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 | 366 | 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.



Trane (Thailand)

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