



# SYNERGY

*Inverter*  R-410A  
Green Refrigerant

*Split System 6.25-20 Tons*

*Light Commercial*

*TYH/TYA R410A Series 50Hz*

TRANE  
TECHNOLOGIES



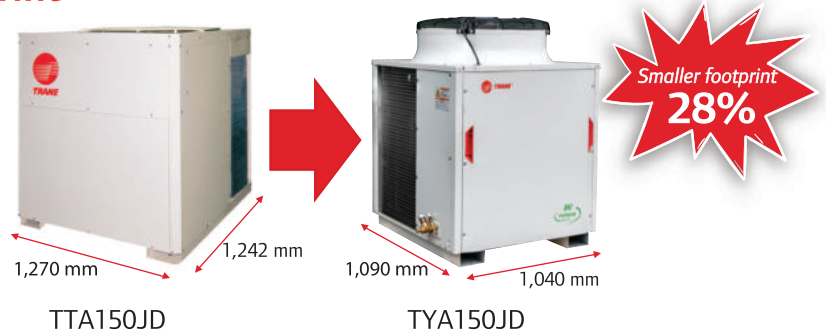
## Light Commercial Inverter System



- 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

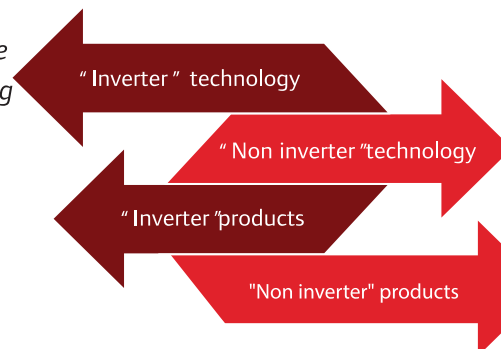
- Trane Synergy Inverter is designed for smaller condensing unit dimensions to save the installation space at maximum of 28% from current product.



## 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.

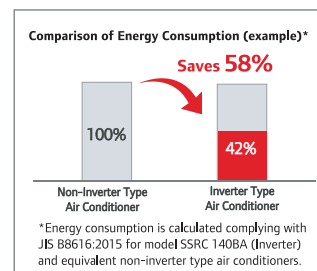


Non inverter air conditioner with constant speed compressor and fan, the temperature is adjusted by turning the motor ON and OFF, which consumes more energy.

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

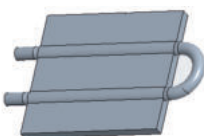


- DC inverter**
- High energy efficiency**
- High reliability**
- Low noise / vibration**

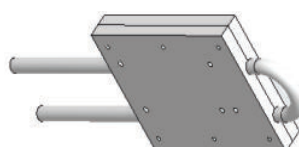


## High Reliability with New Refrigerant Cooled PCB Technology

- New full Package for top discharge and Micro Channel Radiator for side discharge design to enhance heat transfer area 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 Starter and Controller

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



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, Hi/Low pressure, temperature protection, phase protection (Missing phase/Phase loss/Under and Over voltage protection).
- Fully charged R410A refrigerant with shut-off valve.



TYA075-200JD  
(1FAN)



TYA240JD  
(2FAN)



## Product Specifications

| UNIT MODELS       | Indoor unit                 | TYH075JD                                           | TYH100JD                 | TYH120JD                 | TYH160JD                 | TYH200JD                 | TYH240JD                 |
|-------------------|-----------------------------|----------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                   | Outdoor unit                | TYA075JD                                           | TYA100JD                 | TYA120JD                 | TYA150JD                 | TYA200JD                 | TYA240JD                 |
| Electrical Data   | Power Supply                | 380-415/3/50                                       |                          |                          |                          |                          |                          |
| Performance data  | Cooling Capacity (Min-Max)  | 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                        | 11.6                                               | 12.36                    | 12.73                    | 11.51                    | 11.55                    | 12.07                    |
| System data       | Nominal Airflow             | CFM                                                | 3,400                    | 4,000                    | 5,300                    | 7,000                    | 8,000                    |
|                   | 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             | 7/8"                                               | 7/8"                     | 1 1/8"                   | 1 1/8"                   | 1 3/8"                   | 1 5/8"                   |
|                   | Liquid Line OD              | 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)                 |
|                   | Drain Connection Type       | Steel Pipe - MPT                                   |                          |                          |                          |                          |                          |
|                   |                             |                                                    |                          |                          |                          |                          |                          |
| Indoor Units      | Type                        | Electronics Expansion Valve                        |                          |                          |                          |                          |                          |
| Flow control      |                             |                                                    |                          |                          |                          |                          |                          |
| Fan               | Fan Type                    | Double Inlet Centrifugal with Forward Curved Wheel |                          |                          |                          |                          |                          |
|                   | Qty                         | 1                                                  | 2                        | 2                        | 2                        | 2                        | 2                        |
|                   | Drive Type                  | Belt - Drive                                       |                          |                          |                          |                          |                          |
|                   | Output                      | 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)                  | 520x1,465x916                                      | 521x1,833x916            | 620x1,833x916            | 798x2,088x1,260          | 849x2,366x1,319          |                          |
|                   | Weight                      | kg                                                 | 94                       | 138                      | 143                      | 175                      | 235                      |
|                   |                             |                                                    |                          |                          |                          |                          |                          |
| Outdoor Units     | Unit (Net)                  | 290                                                |                          |                          |                          |                          |                          |
| Compressor        | Type                        | 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                        |
|                   | Type                        | AC motor                                           |                          |                          |                          |                          |                          |
|                   | Output                      | 650                                                | 650                      | 650                      | 1,050                    | 1,580                    | 2 x 650                  |
|                   | Qty x RLA                   | 1.5                                                | 1.5                      | 1.5                      | 2.1                      | 3.1                      | 2 x 1.5                  |
| Dimension (HxWxD) | Unit (Net)                  | 1,215x900x841                                      |                          | 1,382x900x841            |                          | 1,370x1,040x1,090        |                          |
| Weight            | Unit (Net)                  | 140                                                | 141                      | 152                      | 175                      | 200                      | 290                      |