



LARGE COMMERCIAL

*Split System 23-55 Tons
RAUP/TTV Series 50 Hz*

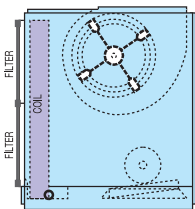


System Performance Matrix

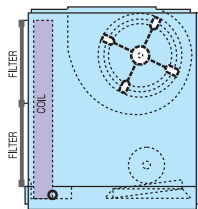
| Model | | Evaporator cfm | Total Capacity MBH | Sensible Capacity MBH |
|----------|--------|-------------------|-----------------------|--------------------------|
| Outdoor | Indoor | | | |
| RAUP 250 | TTV250 | 6600 | 270 | 184 |
| | | 7760 | 278 | 197 |
| | | 9050 | 286 | 211 |
| RAUP 300 | TTV250 | 6600 | 308 | 199 |
| | | 7760 | 318 | 213 |
| | | 8900 | 326 | 226 |
| RAUP 300 | TTV300 | 7900 | 323 | 222 |
| | | 9240 | 333 | 237 |
| | | 10600 | 341 | 251 |
| RAUP 400 | TTV300 | 7900 | 376 | 243 |
| | | 9240 | 388 | 260 |
| | | 10600 | 398 | 276 |
| RAUP 400 | TTV400 | 10300 | 408 | 283 |
| | | 12120 | 421 | 303 |
| | | 13900 | 432 | 321 |
| RAUP 500 | TTV400 | 10300 | 489 | 316 |
| | | 12120 | 504 | 338 |
| | | 13900 | 517 | 358 |
| RAUP 500 | TTV500 | 12900 | 525 | 369 |
| | | 15130 | 541 | 395 |
| | | 17400 | 555 | 419 |
| RAUP 600 | TTV500 | 12900 | 603 | 401 |
| | | 15130 | 622 | 429 |
| | | 17400 | 638 | 455 |
| RAUP 600 | TTV600 | 15400 | 638 | 461 |
| | | 18080 | 658 | 493 |
| | | 20800 | 674 | 523 |

Notes : 1. Matching capacities based on ambient temperature of 95°F and 80/67°F air dry bulb/ wet bulb entering the air handler coil.
2. Product design and specification are subject to change without notice.

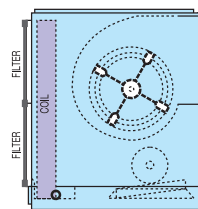
Fan Arrangement



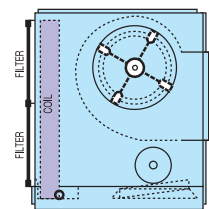
Arrangement 1
(Standard arrangement
for TTV250-600)



Arrangement 2



Arrangement 3



Arrangement 4

General Data - Condensing Units

| UNIT MODELS | | RAUP 250 | RAUP 300 | RAUP 400 | RAUP 500 | RAUP 600 |
|--|-----------|-------------------|-------------------|-------------------|-------------------|-------------------|
| POWER CONNECTION | V/ph/Hz | | | 380-415/3/50 | | |
| MCA ¹ | A | 53.9 | 58.1 | 91.6 | 102.1 | 110.1 |
| Unit Capacity Steps (%) | | 100-50 | 100-50 | 100-75-50-25 | 100-75-50-25 | 100-75-50-25 |
| SYSTEM DATA | | | | | | |
| Refrigerant Type | | R22 | R22 | R22 | R22 | R22 |
| No. Refrigerant Circuits | | 1 | 1 | 2 | 2 | 2 |
| Refrigerant Connection Type | | Brazed | Brazed | Brazed | Brazed | Brazed |
| Refrigerant Charge approximate per circuit | lb (kg) | 44 (20) | 60.6 (27.5) | 43 (19.5) | 44 (20) | 60.6 (27.5) |
| Suction Line OD | in (mm) | 2-1/8 (53.98) | 2-1/8 (53.98) | 1-5/8 (41.28) | 2-1/8 (53.98) | 2-1/8 (53.98) |
| Liquid line OD | in (mm) | 7/8 (22.23) | 7/8 (22.23) | 7/8 (22.23) | 7/8 (22.23) | 7/8 (22.23) |
| COMPRESSOR | | | | | | |
| Compressor Type | | Scroll | Scroll | Scroll | Scroll | Scroll |
| Qty | | 2 | 2 | 4 | 4 | 4 |
| Model | | 13T-13T | 15T+15T | 2x(10T+10T) | 2x(13T+13T) | 2x(15T+15T) |
| Speed Number | | 1 | 1 | 1 | 1 | 1 |
| V/ph/Hz | | | | 380-415/3/50 | | |
| RLA/LRA (each) ² | A | 22.9/145.0 | 24.2/175.0 | 20.7/130.0 | 22.9/145.0 | 24.2/175.0 |
| Motor RPM | rpm | 2900 | 2900 | 2900 | 2900 | 2900 |
| COIL | | | | | | |
| Qty | | 1 | 1 | 2 | 2 | 2 |
| Tube Size OD | in (mm) | 3/8 (9.5) | 3/8 (9.5) | 3/8 (9.5) | 3/8 (9.5) | 3/8 (9.5) |
| Rows | | 3 | 3 | 3 | 3 | 3 |
| Fins per inch | | 12 | 12 | 12 | 12 | 12 |
| FAN | | | | | | |
| Fan Type | | Propeller | Propeller | Propeller | Propeller | Propeller |
| Qty | | 2 | 3 | 3 | 4 | 6 |
| Drive Type | | Direct | Direct | Direct | Direct | Direct |
| Nominal Airflow ² | cfm (cmh) | 11,500 (19,539) | 15,000 (25,485) | 17,100 (29,053) | 22,280 (37,853) | 29,400 (49,950) |
| MOTOR | | | | | | |
| Qty | | 2 | 3 | 3 | 4 | 6 |
| Motor hp (each) | hp (kW) | 0.4 (0.3) | 0.4 (0.3) | 0.4 (0.3) | 0.4 (0.3) | 0.4 (0.3) |
| No. of Speed | | 1 | 1 | 1 | 1 | 1 |
| Motor Speed | rpm | 875 | 875 | 875 | 875 | 875 |
| V/ph/Hz | | | | 380-415/3/50 | | |
| RLA/LRA (each) | | 1.32/2.80 | 1.32/2.80 | 1.32/2.80 | 1.32/2.80 | 1.32/2.80 |
| DIMENSION (HxWxD) | | | | | | |
| Crated (Shipping) | mm | 1,700x2,620x1,420 | 1,700x3,200x1,420 | 1,650x2,880x2,160 | 1,960x2,880x2,160 | 1,850x3,240x2,160 |
| Unit (Net) | mm | 1,465x2,294x1,222 | 1,465x2,952x1,222 | 1,414x2,583x1,920 | 1,718x2,583x1,920 | 1,515x2,980x1,920 |
| WEIGHT | | | | | | |
| Crated (Shipping) | lb (kg) | 1,420 (644) | 1,676 (760) | 2,284 (1,036) | 2,824 (1,281) | 2,745 (1,245) |
| Unit (Net) | lb (kg) | 1,356 (624) | 1,631 (740) | 2,207 (1,001) | 2,747 (1,246) | 2,668 (1,210) |

¹ MCA - Minimum Circuit Ampacity.

² At 7 deg C SST and 35 deg C Ambient, Subcooling 8.3 K, Superheat 11.1 K.

³ Nominal Airflow is rated with standard air-dry coil.

Note : Product design and specification are subject to change without notice.

General Data - Air Handler Unit

| UNIT MODELS | | TTV 250 | TTV 300 | TTV 400 | TTV 500 | TTV 600 |
|--------------------------------|----------|----------------------|---|------------------------|--|------------------------|
| POWER CONNECTION | V/ph/Hz | | | 380-415/3/50 | | |
| MCA ¹ | A | 10.0 | 15.0 | 15.0 | 19.0 | 27.5 |
| SYSTEM DATA | | | | | | |
| Refrigerant Type | | R22 | R22 | R22 | R22 | R22 |
| No. Refrigerant Circuits | | 2 | 2 | 2 | 2 | 2 |
| Refrigerant Connection Type | | Brazed | Brazed | Brazed | Brazed | Brazed |
| Suction Line OD | in (mm) | 2-1/8 (53.98) | 2-1/8 (53.98) | 1-5/8 (41.28) | 2-1/8 (53.98) | 2-1/8 (53.98) |
| Liquid Line OD | in (mm) | 7/8 (22.23) | 7/8 (22.23) | 7/8 (22.23) | 7/8 (22.23) | 7/8 (22.23) |
| COIL | | | | | | |
| Tube Size OD | in (mm) | 3/8 (9.53) | 3/8 (9.53) | 3/8 (9.53) | 1/2 (12.7) | 1/2 (12.7) |
| Rows | | 3 | 3 | 3 | 4 | 4 |
| Fins per inch | | 12 | 12 | 12 | 12 | 12 |
| Refrigerant Flow Control | | Expansion Valve | Expansion Valve | Expansion Valve | Expansion Valve | Expansion Valve |
| Drain Connection Size | in (mm) | 1.0 (25.4) | 1.0 (25.4) | 1.0 (25.4) | 1.0 (25.4) | 1.0 (25.4) |
| FAN | | | | | | |
| Fan Type | | Centrifugal FC | Centrifugal FC | Centrifugal FC | Centrifugal FC | Centrifugal FC |
| Qty | | 1 | 1 | 2 | 2 | 2 |
| Fixed Drive Type | | Belt and Pulley | Belt and Pulley | Belt and Pulley | Belt and Pulley | Belt and Pulley |
| Fan Speed - Std. (Factory set) | rpm | 828 | 870 | 923 | 725 | 780 |
| Nominal Airflow ² | | 7,760 (13,180) | 9,240 (15,700) | 12,120 (20,590) | 15,130 (25,700) | 18,080 (30,720) |
| MOTOR | | | | | | |
| Motor Type | | | | TEFC | | |
| Qty | | 1 | 1 | 1 | 1 | 1 |
| Motor hp - Std. | hp (kW) | 5 (3.7) | 7.5 (5.5) | 7.5 (5.5) | 10 (7.5) | 15 (11) |
| Hi Static | | 7.5 (5.5) / 10 (7.5) | 10 (7.5) / 15 (11) | 10 (7.5) / 15 (11) | 15 (11) / 20 (15) | 20 (15) |
| No. of Speed | | 1 | 1 | 1 | 1 | 1 |
| V/ph/Hz | | | | 380-415/3/50 | | |
| RLA/LRA | | 8.0/63.0 | 12.0/79.0 | 12.0/79.0 | 15.2/111.0 | 22.0/153.0 |
| FILTER | | | | | | |
| Type | | Washable | Washable | Washable | Washable | Washable |
| Qty | | 8 | 9 | 9 | 12 | 9 |
| Size (WxLxD) - Std. | in | 16x20x1 | 4-5x20x1 2-16x20x1 1-16x25x1 2-15x25x1 | 6-16x25x1 3-20x25x1 | 2-16x20x1 6-16x25x1 1-20x25x1 3-25x25x1 | 3-20x20x1 6-20x25x1 |
| DIMENSION (HxWxD) | | | | | | |
| Crated (Shipping) | mm | 1,500x2,100x1,290 | 1,650x2,100x1,290 | 1,780x2,390x1,290 | 1,900x2,900x1,520 | 1,980x2,900x1,520 |
| Unit (Net) | mm | 1,219x1,808x1,040 | 1,372x1,808x1,040 | 1,520x2,088x1,040 | 1,653x2,596x1,275 | 1,777x2,596x1,275 |
| WEIGHT | | | | | | |
| Crated (Shipping) | kg (lbs) | 402 (886) | 470 (1,036) | 543 (1,197) | 768 (1,693) | 832 (1,834) |
| Unit (Net) | kg (lbs) | 353 (778) | 421 (928) | 487 (1,073) | 685 (1,510) | 749 (1,651) |

¹ MCA - Minimum Circuit Ampacity.

² CFM is rated with standard air-dry coil.

Note : Product design and specification are subject to change without notice.

Product Specification



Condensing Units - RAUP Model

Standard Features

- Hermetic Scroll compressor.
- Microprocessor Controller with trouble shooting.
- Factory leak and pressure tested at 400 psig.
- Unit panels constructed of 0.9 mm. galvanized steel.
- Exterior panels are cleaned and then chemically treated and finished with a weather-resistant baked polyester powder paint.
- Heavy gauge steel mounting/lifting rails under base.
- Direct-drive, vertical discharge.
- 3-phase motors with permanently lubricated ball bearings.
- Utilization range of plus or minus 10 percent of the nameplate voltage.
- Condenser fan motor(s) built-in thermal overload protection. •Colored and numbered wiring.
- Come with build-in under/over voltage and phase protection to prevent compressor damage from unstable electrical source



Air Handling Units - TTV Model

Standard Features

- Vertical or Horizontal discharge configuration.
- Zinc coated, heavy gauge, galvanized steel cabinet finished with a baked polyester powder paint.
- Completely insulated with fire retardant polyethylene foam.
- Factory installed thermal expansion valve(s).
- Evaporator coil leak-tested
- Double inlet, double width, forward curved centrifugal type evaporator fan(s) with fixed belt drive.
- Thermal overload protection for the evaporator fan motor.
- Washable air filters.
- Oversized motors for high static pressure applications (Optional).

Features Summary



Micro processor controller



1, 2, 4 Stage Thermostat Digital Display (Option)



1 or 2 Stage Thermostat - Without Display (Option)



AHU Starter Panel (Option)

- High compressor EERs.,
- Less vibration and a quieter operation
- Durability / Extended Life: Built in dirt separator to prevent dirt reaching the bearings. High volume oil sump prevents excessive oil loss.
- Compressor Protection: External Overload Protector. External high and low pressure switches.
- Tandem Capability: Achieves high part load efficiencies and additional part load control.
- Sight glass & oil charging valves
- 3 Wire DOL Starter, minimizing field installation.

Robust Casing

- Corrosion resistant coated coils as an option.
- Weather resistant baked matt polyester powder painted GI panels.
- Heavy gauge welded steel base with mounting holes.
- Aluminium Blade propeller fans.
- Fully Factory leak and pressure tested.

Micro Controller with labeled and numbered wiring.

- New PCB with 7-segment display is more user friendly and helpful to easily understand the code.
- Troubleshooting status display helps reduce service time.
- Higher reliability than traditional hard wired systems.

Option

Trane Multi-Stage Thermostat controlled by micro processor is available for 1, 2 and 4 stage monitor, 7-segment display, 15°C–30°C temperature setting, connectable with the external sensor & auto-restart function with ON/OFF switch.

Trane AHU Starter Panel particularly controls the HVAC system. Integrated with motor and compressor protection system, reliable according to UL/IEC/NEMA standard and easy to install.



Trane optimizes the performance of home and buildings around the world. A business of Ingersoll Rand, the leader in creating and sustaining safe, comfortable, and energy efficient environments, Trane offers a broad portfolio of advance controls and HVAC systems, comprehensive building services, and parts. For more information, visit www.tranethailand.com

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SSA5-SLB002-EN December 26, 2014

