



LARGE COMMERCIAL



*Split System 23-55 Tons
RAUP/TTV R22 Series 50Hz*

TRANE
TECHNOLOGIES



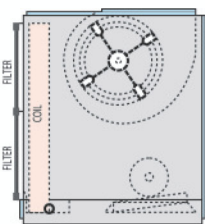


System Performance Matrix

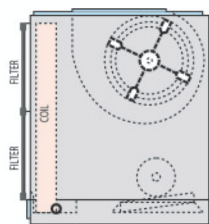
Model		Evaporator cfm	Total Capacity MBH	Sensible Capacity MBH
Outdoor	Indoor			
RAUP250	TTV250	6,600	270	184
		7,760	278	197
		9,050	286	211
RAUP300	TTV250	6,600	308	199
		7,760	318	213
		9,050	326	226
RAUP300	TTV300	7,900	323	222
		9,240	333	237
		10,600	341	251
RAUP400	TTV300	7,900	376	243
		9,240	388	260
		10,600	398	276
RAUP400	TTV400	10,300	408	283
		12,120	421	303
		13,900	432	321
RAUP500	TTV400	10,300	489	316
		12,120	504	338
		13,900	517	358
RAUP250	TTV500	12,900	525	369
		15,130	541	395
		17,400	555	419
RAUP600	TTV500	12,900	603	401
		15,130	622	429
		17,400	638	455
RAUP600	TTV600	15,400	638	461
		18,080	658	493
		20,800	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.

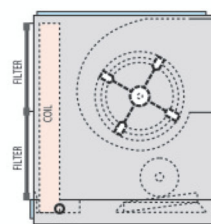
Fan Arrangement



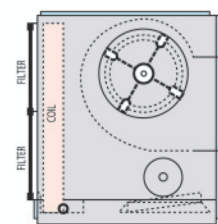
Arrangement 1
(Standard arrangement
for TTV250-600)



Arrangement 2



Arrangement 3



Arrangement 4



General Data - Condensing Units

UNIT MODELS		RAUP250	RAUP300	RAUP400	RAUP500	RAUP600
POWER CONNECTION	V/ph/Hz			380-415/3/50		
MCA ¹	A	54.2	58.4	91.9	102.6	110.8
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	kg	20	27.5	19.5	20	27.5
Suction Line OD	in	2-1/8	2-1/8	1-5/8	2-1/8	2-1/8
Liquid Line OD	in	7/8	7/8	7/8	7/8	7/8
COMPRESSOR						
Compressor Type				Hermetic Scroll		
Qty		2	2	4	4	4
Model		13T-13T	15T+15T	2x(10T+10T)	2x(13T+13T)	2x(15T+15T)
V/ph/Hz				380-415/3/50		
RLA (each) ²	A	22.9	24.2	20.7	22.9	24.2
COIL						
Qty		1	1	2	2	2
Tube Size OD	in	3/8	3/8	3/8	3/8	3/8
Fins per inch		12	12	12	12	12
FAN						
Fan Type				Propeller		
Qty		2	3	3	4	6
Drive Type		Direct	Direct	Direct	Direct	Direct
MOTOR						
Qty		2	3	3	4	6
Motor Output (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
V/ph/Hz				380-415/3/50		
RLA (each)		1.32	1.32	1.32	1.32	1.32
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)	kg	644	760	1,036	1,281	1,245
Unit (Net)	kg	624	740	1,001	1,246	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.

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

General Data - Air Handling Units

UNIT MODELS		TTV250	TTV300	TTV400	TTV500	TTV600
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	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8
Liquid Line OD	in	7/8	7/8	7/8	7/8	7/8
COIL						
Tube Size OD	in	3/8	3/8	3/8	1/2	1/2
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	1.0	1.0	1.0	1.0	1.0
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
Nominal Airflow ²	cfm (cmh)	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 Output - Std	hp (kW)	5.5(4.0)	7.5 (5.5)	7.5 (5.5)	10 (7.5)	15 (11)
Hi Static (Option)		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 (Std. Motor)		8.56	12.0	12.0	15.2	22.0
FILTER						
Type		Washable	Washable	Washable	Washable	Washable
Qty		8	9	9	12	9
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	402	470	543	768	832
Unit (Net)	kg	353	421	487	685	749

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



RAUP

- Hermetic Scroll compressor.
- Microprocessor Controller with troubleshooting.
- 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



TTV

- 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

- 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.
- 3 Wire DOL Starter, minimizing field installation.

Microcontroller 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

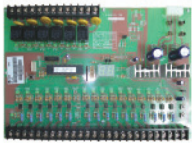
Trane Multi-Stage Thermostat controlled by micro processor is available for 1, 2 and 4 stage monitor, 7-segment display, 15°C–30°C temperature setting, connectable with the external sensor & auto-restart function with ON/OFF switch.

Trane AHU Starter Panel/Smart Starter

Particularly controls the HVAC system. Integrated with motor and compressor protection system and temperature control, reliable according to UL/IEC/NEMA standard and easy to install.

Factory Mounted Control DOL Starter

Take out microprocessor while still maintain necessary functions for easier operation.



Microprocessor controller



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



1 or 2 Stage Thermostat - Without Display (Option)



AHU Starter Panel/Smart Starter (Option)



เทรน (ประเทศไทย)

เลขที่ 1126/2 ชั้น 30-31 อาคารวานิช 2 ด.เพชรบุรีตัดใหม่ แขวงมักกะสัน เขตราชเทวี กรุงเทพฯ 10400

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LARGE COMMERCIAL

Split System 23-45 Tons

TTV/TTA R410A Series 50 Hz



TTV-TTA R410A

Cool You, Cool The Earth

Specially design of commercial and industrial air conditioner with non-ozone depletion refrigerant R-410A to provide steady comfort with reliability and flexibility for all applications in split air conditioning system together with effort to cool down the earth and protect our environment.

Quality and Reliability

• Scroll compressors are applied with excellent reliability and high efficiency.

- All units are 100% run tested prior to leaving the production line.
- Protect compressor damage from unstable electrical source or mis-phase connection with under/over voltage phase protection device.

TTV Air Handling Unit

- Vertical or horizontal discharge configuration (Arrangement 1 as standard)
- Power paint finished casing.
- Completely insulated with fire retardant insulation.

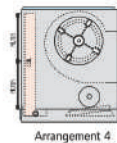
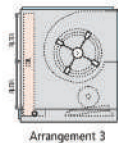
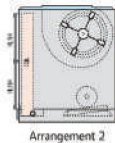
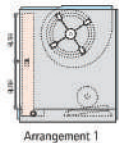
- Factory installed thermal expansion device (TXV).

TTA Condensing Unit

- Power paint finished casing.
- External current overload for compressor with under/over voltage over voltage & phase protector
- Refrigerant shut-off valve
- High & low pressure switch



Fan Arrangement



Product Specifications

Models	Indoor unit		TTV250JD	TTV250JD	TTV300JD	TTV300JD	TTV300JD	TTV400JD	TTV400JD	TTV500JD	
	Outdoor unit		2xTTA120JD	2xTTA150JD	2xTTA150JD	2xTTA180JD	2xTTA200JD	2xTTA200JD	2xTTA240JD	2xTTA240JD	
Performance Data	Nominal Cooling Capacity	Btu/h	245,000	310,000	333,000	360,000	388,000	421,000	480,000	516,000	
	Nominal Airflow	CFM	7,760	7,760	9,240	9,240	9,240	12,120	12,120	15,130	
Indoor Units											
Electrical Data	Power Supply	V/ph/Hz	380-415/3/50								
No. of Refrigerant Circuit			2	2	2	2	2	2	2	2	
Expansion Device	Type		Thermostatic Expansion Valve								
Fan	Type		Forward Curve Centrifugal Fan								
	Qty		1	1	1	1	1	1	1	1	
Fan Motor	Output	hp	5.5	5.5	7.5	7.5	7.5	7.5	7.5	10	
	RLA x Qty	A	8.6	8.6	12.0	12.0	12.0	12.0	12.0	15.2	
Pre-Filter	Type		1-in Thickness Washable Aluminium								
Dimensions	H x W x D	mm	1,219 x 1,808 x 1,040			1,372 x 1,808 x 1,040			1,520 x 2,088 x 1,040		1,653x2,569x1,275
Weight		kg	353			421			487		685
Refrigerant Pipe Size (per each circuit)	Liquid	in	7/8			7/8			7/8		7/8
	Suction	in	2-1/8			2-1/8			2-1/8		2-1/8
Outdoor Units (per EACH)											
Electrical Data	Power Supply	V/ph/Hz	380-415/3/50								
No. of Refrigerant Circuit			1	1	1	1	1	1	1	1	
Compressor	Type		Hermetic Scroll								
	RLA x Qty	A	21.4	27.6	18.6 x 2	20.0 x 2	25.0 x 2				
Fan Motor	RLA x Qty	A	1.5	1.5	1.5 x 2	1.5 x 2	1.5 x 2				
Dimensions	H x W x D	mm	1,070x1,042x953		1,270 x 1,242 x 953		1,050 x 2,200 x 1,050				
Weight		kg	199	245	415	428	462				
Piping Connection Type			Shut-off Valve - Braze Connection								
Refrigerant Pipe Size	Liquid	in	1/2		5/8		5/8		5/8		
	Suction	in	1-3/8		1-5/8		1-5/8		1-5/8		
Refrigerant			R-410A								

Note: 1. Capacity is rated at ARI conditions of 80°/67° FDB/FWB for Indoor & 95° FDB for Outdoor
2. Unit dimensions depth does not include the dimensions of unit's legs.
3. Design and specification are subject to change without notice.



ทราน (ประเทศไทย)

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