

# SPLIT WATER COOLED CONDENSING UNIT

*Minisplit Air Conditioner 9,000 – 60,000 BTU/H WTK R-410A Series 50Hz* 



## Human Comfort Solutions

#### Improved Cash Management

- Factory packaging and testing reduce field labor, installation risk and improve system reliability.
- Phased equipment start-up matches building lease-up.
- Short construction cycles maximize cash flow.
- Requires less sophisticated maintenance than built-up systems.

#### **Tenant Satisfaction**

- Enjoy the benefits of individual tenant metering since buildings can often be occupied on a tenant per unit basis.
- After-hour operational cost savings are tremendously reduced since units can be deactivated when not required.
- Complete HVAC system of each area minimizes tenant inconvenience duringroutine maintenance.

#### Low First Cost

- Factory packaged controls reduce field labor, installation time, and costs.
- Minimize need and cost for fire dampers and air shafts.
- Large equipment rooms and penthouses are not needed.
- Condenser water is available on each floor for tenant computer systems.

#### **Economical Operation**

- Area-by-area system results in energy saving since only air conditioners of specific areas require cooling
- Especially saves energy after normal building occupancy hours.
- Annual system energy consumption comparable to central chilled water system is reduced significantly during partial occupancy and after-hours.

#### Space Saving

- Compact size.
- Unit can be installed in a very limited space.

#### A New Standard For The Industry

Trane sets new standards for

- Serviceability
- Installability
- Reliability
- Flexibility of application in their commercial air conditioning products.

These products enhance Trane's reputation for quality air conditioning equipments.

#### **Quality Control**

All of Trane products have been inspected in assembly line. After completion, the condensing unit has been evacuated, leak tested and holding charged with refrigerant to protect rust and dirt. This is to assure that every parts will work in the right condition and at the highest efficiency.



#### **Table 1- Product Specification**

Unit Model		WTKA09	WTKA12	WTKA18	WTKA24	WTKA30	WTKA36	WTKB48	WTKB60
Nominal Capacity	Btu/h	9,000	12,000	18,000	24,000	30,000	36,000	48,000	60,000
Power supply	V/ph/Hz	220-240/1/50 380-415/3/5						5/3/50	
Compressor Data	Туре	Rotary					Scroll		
Qty		1	1	1	1	1	1	1	1
RLA	A	4.2	5.2	7.6	10.7	13.3	16.1	8.6	9.8
Condenser Data	Туре	Tube in tube							
Water Inlet/Outlet Size	in	3/4	3/4	3/4	3/4	3/4	3/4	7/8	7/8
Outer Tube Diameter	in	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
Inner Tube Diameter	in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Water Coil Operating Pressure	psig	20	20	20	20	20	20	20	20
Refrigerant Type		R-410A							
Dimensions (HxWxD)	mm	400 x 400 x 400			520 x 400 x 50			00	
Weight	kg	29	27	32	43	52	53	63	65

Note: 1.) Please see Table 3 for the piping connection size for each model.

Condenser water pipe size is designed upon condenser water flow rate and may not be the same size as Condenser Water Inlet/Outlet size.
Product design and specification are subject to change without notice.

### Figure 1- System Diagram of WTK



### Performance Data

### **Table 2- System Performance Matrix**

Cond. Unit	Air Handler	Supply Air	Cooling Cap.	Cond. Water	Pressure Drop	D	Weight (kg)		
Model	Model	cfm	Btu/h	GPM	Ft of water	Height	imensions - (m Width	Depth	
WTKA12	MCXA12GB MCDA12AA MCDA12DB	400	12,000	3.0	1.0	630 230 260	1,075 946 946	235 445 494	30 20 21
WTKA18	MCXA18GB MCDA18AA MCDA18DB	600	18,000	4.5	1.4	630 260 260	1,075 946 946	235 445 494	30 23 24
WTKA24	MCXA24GB MCDA24AA MCDA24DB	800	24,000	6.0	2.2	630 260 260	1,325 1,098 946	235 445 510	35 26 25
WTKA30	MCXA30GB MCDA30EB MCDA30DB	1,000	30,000	7.5	5.5	630 300 300	1,575 1,098 1,098	235 625 625	46 37 37
WTKA36	MCX536GB MCDA36EB MCDA36DB	1,200	36,000	9.0	8.0	630 300 300	1,575 1,251 1,251	235 625 625	47 41 41
WTKB48	MCXB48GB MCDB48EB MCDB48DB	1,600	48,000	12.0	12.8	630 408 408	1,825 1,098 1,098	235 759 759	67 49 49
WTKB60	MCXB60GB MCDB60EB MCDB60DB	2,000	60,000	15.0	20.0	630 408 408	2,075 1,251 1,251	235 759 759	70 55 55

 At ARI system rating conditions of 80°F-DB/67°F-WB indoor.
Condensing water temperature inlet/outlet = 90/100°F. Notes:

Sondersing water temperature interoducer = 50,100 T.
Nominal cfm at high speed fan.
MCX-GB and MCD-DB are both for Thailand and export market. MCD-AA and MCD-EB are for Thailand market only.

#### Figure 2- Dimensional Data





WTKA24-B60

#### **Table 3- Piping Connection Size**

Mode	Liquid Line (in)	Suction Line (in)			
WTKA09	1/4	3/8			
WTKA12-18	3/8	5/8			
WTKA24-30	3/8	5/8			
WTKA36	3/8	3/4			
WTKB48-60	1/2	7/8			

# Mechanical Specifications

#### **Condensing Section**

The Trane split water-cooled condensing units are designed for commercial and industrial applications. They can be matched with a variety of air handlers in either convertible, ceiling, or ducted air handlers. These units could be arranged to meet different sizes of space to make them suitable for every application.

#### Cabinet

Unit panels are fabricated of heavy-gauge steel and finished with a polyester powder painting and weather-resistant baked enamel finish. Unit surface has been tested 500 hours in salt spray test. Condenser water inlet/ outlet and electrical wiring holes are provided. Base drain is a 3/4 -inch female connection.

#### **High Efficiency Compressor**

Special low-friction valve ports and rubbing surfaces allow same capacity for less electrical power input-higher EER. Compressor is externally mounted on isolators to isolate the operating sound for quiet operation.

#### **Refrigerant Circuit**

Refrigerant piping for condensing unit has been designed and installed to absorb vibration. Packed valves make the quicker and easier installation of refrigerant lines. Easy for refrigerant charging with charging port.

#### Water-Cooled Condenser

Tube in tube condenser is constructed with copper tubing. Water copper pipe connections are provided for condenser water inlet and outlet.

#### Options

- Hi-Low pressure cut off (from WTKA09 to WTKA36)
- 3 minute time delay (for use with MCD)

#### **Fan Coil Section**

#### Convertible Air Handler MCX Series

The MCX-GB series is the compact design with 3-convenience installation-floor, low wall, and ceiling types. Fashionable adjustable discharge grille and decorative return air grilles are modern and elegant outlook. Unit panels are internally acoustically insulated with closed cell elastomeric insulator for quiet opera- tion and healthy indoor air quality.

#### **Ceiling Air Handler**

Model MCD-AA and MCD-EB air handler are designed for horizontal concealed ceiling applications, commonly used within the closets of hotels, motels and apartment. Standard features include triple protection drain pan (galvanized steel, polystyrene foam, and plastic) providing maximum insulation and water integrity. Servicing is made simple because the motor-blower section is completely removable from the coil section.

#### **Ducted Air Handler**

Model MCD-DB is the high static version of the model MCD-AA and MCD-EB unit. It utilizes the larger diameter fans operating at low RPM to achieve the increased static pressure requirements needed for limited distribution ducts. The standard unit has a 1-inch supply air duct collar to facilitate field connection of the supply ductwork.



МСХ



MCD -- AA



MCD -- EB/DB





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