



TM24H50		
Performance		
Cooling Rated Capacity	Btu/h	22,000
Cooling Cap. Range Min-Max	Btu/h	7,500~33,000
SEER/EER		23.0/12.5
Heating Rated Capacity	Btu/h	26,000
Heating Cap. Range Min-Max	Btu/h	7,000~31,000
HSPF/COP		10.5/3.7
Electrical		
Voltage, Phase, Cycle	V-Ph-Hz	208/230-1-60
Voltage Range	V	187~253
MCA	A	23
MOP	A	40
Compressor RLA	A	17
Fan Motor FLA	A	0.4
Piping		
Total Pipe Length	ft	230
Pipe Length to Any Indoor Unit Min-Max	ft	10~82
Max Elevation between Indoor Units	ft	26
Max Lift/Drop from ODU to IDU	ft	26
Liquid Line	in	1/4
Vapor Line	in	3/8
Connection Type		Flared



Operating Range		
Cooling Outdoor DB	°F	0~118
Heating Outdoor DB	°F	-31~75
System Data		
Compressor Type		DC Inverter Rotary
Refrigerant Type		R410A
Pre-Charge	oz	95.2
Pre-Charge Length	ft	98
Additional Charge	oz/ft	0.2
Refrigerant Control		EXV
ODU Sound Pressure (Cooling/Heating)	dB(A)	60/60
Number of IDUs Min-Max		2-3



Job Name:		Date:	
Reference #:			
Signature:			

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ULTRA HEAT MULTI ZONE DUCTLESS HEAT PUMP SYSTEM

System Features	
Core Technology Three Cylinder Two Stage Compressor	G10
Ultra Low Frequency Torque Control	Standard
Power Factor Correction	Standard
Compressor Type	Inverter Rotary
Refrigerant Type	R410A
Electric Expansion Valve (EEV)	3
Basepan With Electric Heater	Standard
Compressor Preheat	Standard
Compressor With Electric Heater (-40° F)	Standard
-40° F Wiring UL Approved	Standard
Multi "Independent" Port Design	Standard
Condenser Fan	Axial
Condenser Motor Type	DC
Condenser Coil	Aluminum Fin/ Copper Tube
Condenser Motor Drive	Direct
Outdoor Fin Coating (Blue)	Acrylic Resin
Intelligent Defrosting	Standard
Low Voltage Startup	Standard
Memory/Power Failure Recovery	Standard
Self Diagnosis	Standard
Ultra Heating (-31°F - 75°F)	Standard
Ultra Cooling (0°F - 118°F)	Standard
XK19 Wired Controller Interface	Standard

Remote Controller Functions ¹
See Individual Indoor Unit Controllers Functions

¹ Not all Remote Controller functions are supported.

XK19 Wired Controller Functions ²	
On/Off	Standard
Operating Mode	Standard
Fan Speed	Standard
Room Setpoint	Standard
Model Numbers	Standard
Timer Mode	Standard
Sleep Mode	Standard
Turbo Mode	Standard
X-Fan Mode	Standard
Privacy Lock	Standard

² Note: Some Indoor models may not support specific system features or functions.



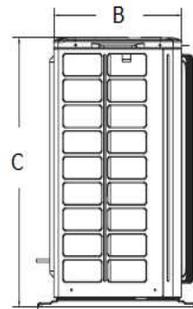
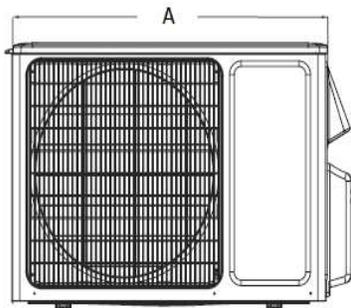
COOLING PERFORMANCE*									
Indoor Entering Temperatures							ULTRA COOL		
Outdoor Ambient DB	68°F DB		73°F DB		80°F DB				
	57°F WB		61°F WB		67°F WB				
	TC	SHC	TC	SHC	TC	SHC			
0°F	17,067	13,385	18,044	14,137	19,870	15,590			
5°F	17,664	13,852	18,674	14,631	20,564	16,135			
17°F	18,502	14,511	19,546	15,324	22,059	17,302			
23°F	20,271	15,901	21,682	17,008	24,843	19,485			
32°F	21,541	16,894	22,756	17,847	25,682	20,137			
41°F	22,315	17,502	23,566	18,482	26,931	21,116			
50°F	22,704	17,806	24,284	19,045	27,825	21,817			
57°F	24,582	19,279	26,293	20,621	28,797	22,579			
67°F	27,840	21,835	29,580	23,196	31,610	24,792			
75°F	27,511	21,580	29,261	22,951	31,320	24,567			
86°F	26,158	20,513	27,898	21,884	30,450	23,882			
95°F	24,756	19,417	26,487	20,768	29,000	22,746			
104°F	23,558	18,477	25,278	19,828	28,246	22,158			
113°F	22,949	17,997	24,679	19,348	27,647	21,678			
122°F	22,349	17,527	24,070	18,878	27,047	21,208			
129°F	21,750	17,057	23,200	18,193	26,100	20,474			

HEATING PERFORMANCE*									
Indoor Entering Air Temperatures							ULTRA COOL		
Outdoor Ambient DB	68°F DB		73°F DB		80°F DB				
	57°F WB		61°F WB		67°F WB				
	TC	Power Input (KW)	COP	TC	Power Input (KW)	COP	TC	Power Input (KW)	COP
-31°F	21,500	5.45	1.16	21,000	5.50	1.12	20,500	5.70	1.05
-22°F	24,954	5.50	1.33	24,292	5.57	1.28	23,801	5.74	1.21
-13°F	27,324	5.58	1.44	26,614	5.64	1.38	26,089	5.82	1.31
-5°F	31,846	5.42	1.72	31,034	5.48	1.66	30,433	5.66	1.58
0°F	31,376	5.51	1.67	30,550	5.58	1.61	29,933	5.75	1.52
5°F	31,523	5.24	1.76	30,703	5.30	1.70	30,097	5.46	1.61
10°F	31,872	5.29	1.77	31,044	5.35	1.70	30,423	5.52	1.62
17°F	31,268	5.25	1.75	30,448	5.31	1.68	29,825	5.48	1.60
20°F	30,852	4.91	1.84	30,427	4.96	1.80	29,802	5.12	1.71
24°F	29,903	5.08	1.72	29,546	5.14	1.68	29,011	5.30	1.60
32°F	29,135	4.86	1.76	28,814	4.92	1.72	28,344	5.07	1.64
41°F	30,281	4.50	1.97	29,984	4.55	1.93	29,535	4.69	1.84
43°F	31,110	3.52	2.59	30,813	3.56	2.54	30,373	3.67	2.42
47°F	34,000	3.60	2.77	33,065	3.64	2.66	32,366	3.76	2.52
53°F	34,340	3.27	3.08	33,394	3.31	2.96	32,695	3.41	2.81
59°F	31,614	3.30	2.81	30,734	3.34	2.70	30,085	3.45	2.56
64°F	32,283	3.03	3.12	31,394	3.06	3.00	30,734	3.16	2.85
70°F	32,895	3.08	3.13	31,987	3.11	3.01	31,308	3.21	2.86
75°F	33,354	2.81	3.48	32,436	2.84	3.34	31,757	2.93	3.17
78°F	33,660	2.84	3.48	32,732	2.87	3.34	32,044	2.96	3.17

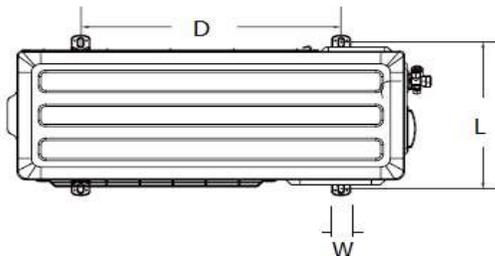
Maximum System Capacity
 TC - Total Capacity (BtuH)
 COP - Coefficient of Performance



OUTLINE AND PHYSICAL DIMENSIONS



A (in)	36.2
B (in)	14.6
C (in)	31.1



D (in)	24.0
L (in)	15.6
W (in)	2.4

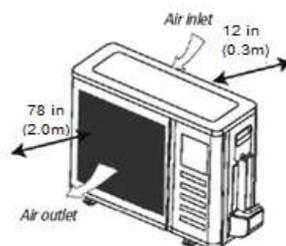
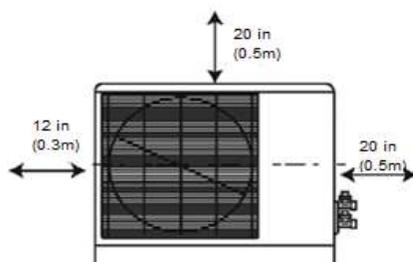
Weight (Net/Shipping)	174/185 lbs
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Suction/Gas Line Port Size

Port #1	3/8-in OD Flared
Port #2	3/8-in OD Flared
Port #3	3/8-in ared

Liquid Line Port Size

Port #1	1/4-in OD Flared
Port #2	1/4-in OD Flared
Port #3	1/4-in OD Flared



Minimum Spacing Requirements

Units: inch (m)

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OPERATIONAL PERFORMANCE SPECIFICATIONS

COOLING CAPACITY (BTUH)

Indoor Units Combinations	Rated System Capacity (BtuH)	Indoor Unit A (BtuH)	Indoor Unit B (BtuH)	Indoor Unit C (BtuH)	Indoor Unit D (BtuH)
9K + 9K	18,000	9,000	9,000	NA	NA
9K + 12K	21,000	9,000	12,000	NA	NA
9K + 18K	25,000	8,400	16,600	NA	NA
12K + 12K	24,000	12,000	12,000	NA	NA
12K + 18K	25,000	10,000	15,000	NA	NA
18K + 18K	25,500	12,750	12,750	NA	NA
9K + 9K + 9K	26,001	8,667	8,667	8,667	NA
9K + 9K + 12K	26,000	8,000	8,000	10,000	NA
9K + 9K + 18K	26,000	7,000	7,000	12,000	NA
9K + 12K + 12K	26,000	6,000	10,000	10,000	NA
12K + 12K + 12K	26,001	8,667	8,667	8,667	NA

HEATING CAPACITY (BTUH)

Indoor Units Combinations	System Capacity (BtuH)	Indoor Unit A (BtuH)	Indoor Unit B (BtuH)	Indoor Unit C (BtuH)	Indoor Unit D (BtuH)
9K + 9K	19,000	9,500	9,500	NA	NA
9K + 12K	22,500	9,500	13,000	NA	NA
9K + 18K	27,000	9,000	18,000	NA	NA
12K + 12K	26,000	13,000	13,000	NA	NA
12K + 18K	28,000	11,200	16,800	NA	NA
18K + 18K	28,500	14,250	14,250	NA	NA
9K + 9K + 9K	29,001	9,667	9,667	9,667	NA
9K + 9K + 12K	29,000	9,000	9,000	11,000	NA
9K + 9K + 18K	29,000	6,000	6,000	17,000	NA
9K + 12K + 12K	29,000	6,000	11,500	11,500	NA
12K + 12K + 12K	29,001	9,667	9,667	9,667	NA

Capacity data is based on the following conditions :

Cooling Nominal Test Conditions

Indoor: 80°F DB/67°F WB

Outdoor: 95°F DB/75°F WB

Heating Nominal Test Conditions

Indoor: 70°F DB/60°F WB

Outdoor: 47°F DB/43°F W

NON-DUCTED INDOOR UNIT

SAPPHIRE WALL MOUNTED INDOOR UNIT

Model			TW09HQ3D6DI(WIFI)	TW12HQ3D6DI(WIFI)	TW18HQ3D6DI(WIFI)	TW24HQ3D6DI(WIFI)
Capacity	Cooling	Btu/h	9000	12000(2900~15354)	18000(4094~21837)	22000(6800~30700)
	Heating	Btu/h	9000	12200(3071~18766)	18000(4094~24566)	24000(6800~32000)
Power Supply		Ph/V/Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz
Airflow Volume	Indoor	m³/h	720/650/600/550/500/450/350	850/800/750/600/550/450/400	1250/1150/1050/950/850/780/600	1400/1300/1200/1100/1000/850/650
	Sound Pressure Level	Indoor	dB(A)	43/40/38/36/33/31/19	49/46/43/40/37/34/22	51/48/45/42/39/36/34
Dimension(WxHxD)	Outline	inch	38-1/4x11-3/4x8-7/8	39-1/4x11-7/8x8-7/8	43-3/8x12-7/8x9-3/4	42-1/2x12-3/4x9-5/8
	Package	inch	41x14-7/8x8-7/8	41-3/4x15x12-5/8	45-1/4x16-1/4x13-3/4	45-1/8x15-3/4x13
Piping Connection	Liquid	inch	1/4	1/4	1/4	1/4
	Gas	inch	3/8	1/2	5/8	5/8
Net Weight/Gross Weight	Indoor	Kg	13.5/16.5	13.5/16.5	16.5/20	16/19.5
Loading Quantity	40'GP	sets	156	156	87	86
	40'HP	sets	180	180	107	108

LOMO WALL MOUNTED INDOOR UNIT

Model			TW09HQ2C2DI(WIFI)	TW12HQ2C2DI(WIFI)	TW18HQ2C2DI(WIFI)	TW24HQ2C2DI(WIFI)
Capacity	Cooling	Btu/h	9000(3099~9599)	12000(3100~13000)	18000(6800~20000)	22000(6824~27296)
	Heating	Btu/h	11000(1911~12000)	13000(2400~14000)	19800(7340~23500)	23000(6824~30700)
Power Supply		Ph/V/Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz
Airflow Volume		m³/h	640/490/410/290	680/490/410/290	950/830/700/570	1200/1100/1000/90
		CFM	376/288/241/170	400/288/241/171	559/488/412/335	706/647/588/530
Sound Pressure Level	Indoor	dB(A)	43/39/35/29	45/39/35/29	47/43/40/39	48/44/40/36
Dimension(WxHxD)	Outline	inch	33-1/4x11-3/8x8-1/4	33-1/4x11-3/8x8-1/4	38-1/4x11-3/4x8-7/8	42-1/2x12-3/4x9-5/8
	Package	inch	36-1/4x14-7/8x11-1/8	36-1/4x14-7/8x11-1/8	41x15-1/8x12-5/8	45-1/4x16-1/4x13-3/4
Piping Connection	Liquid	inch	1/4	1/4	1/4	1/4
	Gas	inch	3/8	1/2	5/8	5/8
Net Weight/Gross Weight	Indoor	Kg	10/12	10/12	12.5/15.5	15.5/19
Loading Quantity	20'GP	sets	300	300	230	172
	40'HP	sets	728/624	728/624	557/489	402/346

FLOOR CEILING TYPE INDOOR UNIT

Model			TM09HTDI	TM12HTDI	TM18HTDI	TM24HBDI
Capacity	Cooling	Btu/h	8500	11900	17000	22800
	Heating	Btu/h	9500	13100	18700	27400
Power Supply		Ph/V/Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz
Airflow Volume		m³/h	700/610/540/420	700/610/540/420	680/590/520/410	950/870/800/720
		CFM	38/35/30/26	38/35/30/26	38/35/30/27	38/35/31/27
Sound Pressure Level	Indoor	dB(A)	43/39/35/29	45/39/35/29	47/43/40/39	48/44/40/36
Dimension(WxHxD)	Outline	inch	34-1/4x26-1/8x9-1/4	34-1/4x26-1/8x9-1/4	34-1/4x26-1/8x9-1/4	47-1/4x26-1/8x9-1/4
	Package	inch	40-5/8x30-3/8x11-3/4	40-5/8x30-3/8x11-3/4	40-5/8x30-3/8x11-3/4	53-5/8x30-3/8x11-3/4
Piping Connection	Liquid	inch	1/4	1/4	1/4	3/8
	Gas	inch	3/8	1/2	1/2	5/8
Net Weight/Gross Weight	Indoor	Kg	25/30	25/30	25.5/30.5	33/40
Loading Quantity	20'GP	sets	231	231	231	175
	40'HP	sets	264	264	264	200



NON-DUCTED INDOOR UNIT

4-WAY CASSETTE INDOOR UNIT

Model			TM12HKDI	TM18HKDI	TM24HKDI
Capacity	Cooling	Btu/h	12000	14400	22800
	Heating	Btu/h	13000	16000	27400
Power Supply		Ph/V/Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz
Airflow Volume		m³/h	650/560/520/450	710/670/590/450	1280/1220/1100/880
Sound Pressure Level	Indoor	dB(A)	44/41/38/34	47/45/41/35	47/45/41/36
Main body Dimension(WxHxD)	Outline	inch	23-1/2x23-1/2x9-1/2	23-1/2x23-1/2x9-1/2	33-1/8x33-1/8x9-1/2
	Package	inch	30-5/8x29x11-3/4	30-5/8x29x11-3/4	37-7/8x37-7/8x12-3/4
Panel Dimension(WxHxD)	Outline	inch	26-3/8x2x26-3/8	26-3/8x2x26-3/8	37-3/8x2-3/8x37-3/8
	Package	inch	30x4-1/8x30	30x4-1/8x30	40-5/8x5-1/4x40-7/8
Piping Connection	Liquid	inch	1/4	1/4	3/8
	Gas	inch	3/8	1/2	5/8
Loading Quantity	40'GP	sets	329	329	168
	40'HP	sets	376	376	192
Net Weight/Gross Weight (Main body)		Kg	20/24	20/24	26/32
Net Weight/Gross Weight (Panel)		Kg	3.5/5	3.5/5	7/11

CONSOLE TYPE INDOOR UNIT

Model			TM09HEDI	TM12HEDI	TM18HEDI
Capacity	Cooling	Btu/h	8800	11900	18000
	Heating	Btu/h	9500	12900	19000
Power Supply		Ph/V/Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz
Airflow Volume		m³/h	500	600	650
Sound Pressure Level	Indoor	dB(A)	40/38/36/33/30/27/25	42/40/38/37/35/32/27	48/46/44/41/37/35/32
Dimension(WxHxD)	Outline	inch	27-1/2x8-1/2x23-5/8	27-1/2x8-1/2x23-5/8	27-1/2x8-1/2x23-5/8
	Package	inch	31x27-1/2x11-1/8	31x27-1/2x11-1/8	31x27-1/2x11-1/8
Piping Connection	Liquid	inch	1/4	1/4	1/4
	Gas	inch	3/8	3/8	1/2
Loading Quantity	20'GP	sets	181	181	181
	40'GP	sets	381/454	381/454	381/454
Net Weight/Gross Weight		Kg	15/18	15/18	15/18

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