



ULTRA HEAT MULTI ZONE DUCTLESS HEAT PUMP SYSTEM

TM42H50		
Performance		
Cooling Rated Capacity	Btu/h	42,000
Cooling Cap. Range Min-Max	Btu/h	8,871~42,991
SEER/EER		23.0/9.0
Heating Rated Capacity	Btu/h	42,000
Heating Cap. Range Min-Max	Btu/h	8,871~46,062
HSPF/COP		10.0/3.4
Electrical		
Voltage, Phase, Cycle	V-Ph-Hz	208/230-1-60
Voltage Range	V	187~253
MCA	A	38
MOP	A	40
Compressor RLA	A	28.5
Fan Motor FLA	A	1.0
Piping		
Total Pipe Length	ft	246
Pipe Length to Any Indoor Unit Min-Max	ft	10~82
Max Elevation between Indoor Units	ft	49
Max Lift/Drop from ODU to IDU	ft	49
Liquid Line	in	1/4
Vapor Line	in	3/8
Connection Type		Flared



Operating Range		
Cooling Outdoor DB	°F	0~115
Heating Outdoor DB	°F	-31~75
System Data		
Compressor Type		DC Inverter Rotary
Refrigerant Type		R410A
Pre-Charge	oz	176.4
Pre-Charge Length	ft	131
Additional Charge	oz/ft	0.2
Refrigerant Control		EXV
ODU Sound Pressure (Cooling/Heating)	dB(A)	62/62
Number of IDUs Min-Max		2-5



Job Name:		Date:	
Reference #:			
Signature:			

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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)	4
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 (-22°F - 75°F)	Standard
Ultra Cooling (0°F - 115°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.



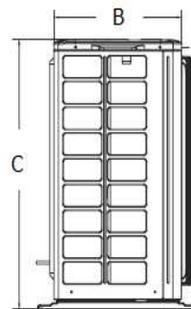
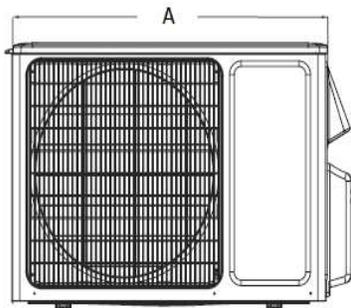
COOLING PERFORMANCE*									
Indoor Entering Temperatures							ULTRA COOL		
Outdoor Ambient DB	68°F DB		73°F DB		80°F DB				
	57°F WB		61°F WB		67°F WB				
	TC	SHC	TC	SHC	TC	SHC			
0°F	24,000	19,500	26,000	20,500	28,900	22,300			
5°F	25,582	20,062	27,045	21,189	29,782	23,368			
17°F	26,796	21,016	28,308	22,193	31,948	25,057			
23°F	29,358	23,030	31,402	24,632	35,980	28,220			
32°F	30,051	53,625	32,274	57,590	37,327	66,603			
41°F	27,549	76,709	29,773	82,901	34,704	96,626			
50°F	25,141	95,143	27,343	103,477	32,122	121,561			
57°F	35,602	27,922	38,080	29,865	41,706	32,701			
67°F	40,320	31,623	42,840	33,594	45,780	35,906			
75°F	39,844	31,254	42,378	33,240	45,360	35,580			
86°F	37,844	29,709	40,404	31,694	44,100	34,587			
95°F	35,854	28,121	38,360	30,078	42,000	32,942			
104°F	34,118	26,759	36,610	28,716	40,908	32,091			
113°F	32,368	25,384	34,860	27,341	39,172	30,716			

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	27,000	5.50	1.44	28,000	5.70	1.44	26,000	5.85	1.30
-22°F	28,744	5.57	1.51	29,134	5.73	1.49	27,998	5.91	1.39
-13°F	32,450	5.65	1.68	31,904	5.81	1.61	30,689	5.99	1.50
-5°F	37,824	5.64	1.97	37,188	5.79	1.88	35,799	5.98	1.76
0°F	40,580	5.73	2.08	39,905	5.89	1.99	38,349	6.08	1.85
5°F	40,771	5.70	2.10	40,085	5.86	2.00	38,558	6.05	1.87
10°F	44,700	5.76	2.27	43,955	5.92	2.18	42,258	6.11	2.03
17°F	42,723	5.72	2.19	42,011	5.88	2.10	40,352	6.06	1.95
20°F	42,686	5.50	2.28	41,671	5.65	2.18	40,320	5.83	2.03
24°F	41,296	5.42	2.23	40,671	5.58	2.14	39,250	5.75	2.00
32°F	40,132	5.19	2.27	39,589	5.33	2.18	38,348	5.50	2.04
41°F	41,630	5.11	2.39	41,141	5.26	2.29	39,959	5.42	2.16
43°F	42,751	5.10	2.46	42,248	5.24	2.36	41,093	5.41	2.23
47°F	46,460	5.22	2.61	45,655	5.36	2.50	43,789	5.53	2.32
53°F	46,920	4.74	2.90	46,101	4.87	2.77	44,234	5.03	2.58
59°F	43,198	4.78	2.65	42,435	4.92	2.53	40,703	5.07	2.35
64°F	44,117	4.39	2.95	43,341	4.51	2.82	41,582	4.65	2.62
70°F	44,945	4.46	2.96	44,169	4.58	2.83	42,358	4.73	2.63
75°F	45,579	4.07	3.28	44,777	4.19	3.14	42,965	4.32	2.92
78°F	45,993	4.11	3.28	45,191	4.22	3.14	43,353	4.36	2.92

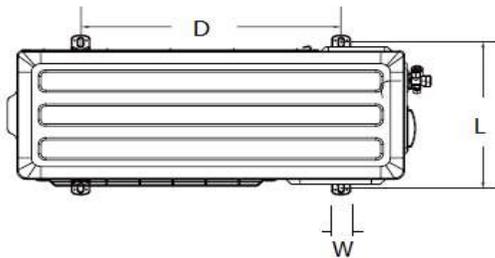
Maximum System Capacity
 TC - Total Capacity (BtuH)
 COP - Coefficient of Performance



OUTLINE AND PHYSICAL DIMENSIONS



A (in)	40.0
B (in)	17.3
C (in)	43.5



D (in)	24.8
L (in)	16.2
W (in)	3.1

Weight (Net/Shipping)	282/300lbs
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Suction/Gas Line Port Size

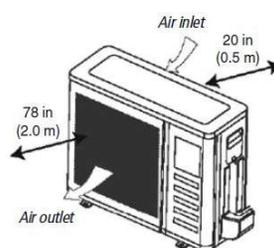
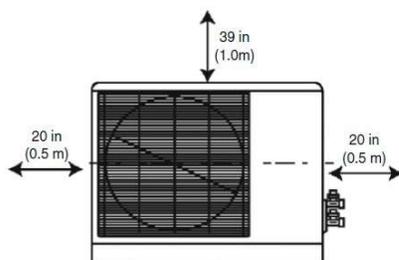
Port A	3/8-in OD Flared
Port B	3/8-in OD Flared
Port C	3/8-in OD Flared
Port D	3/8-in OD Flared
Port E	3/8-in OD Flared

Liquid Line Port Size

Port A	1/4-in OD Flared
Port B	1/4-in OD Flared
Port C	1/4-in OD Flared
Port D	1/4-in OD Flared
Port E	1/4-in OD Flared

Factory Supplied Piping Adapters

Adapter	P/N	Qty
3/8 (F) to 5/8 (M)	6654100009	3
3/8 (F) to 1/2 (M)	6654100013	4
1/4 (F) to 3/8 (M)	6654104	2



Minimum Spacing Requirements

Units: inch (m)

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OPERATIONAL PERFORMANCE SPECIFICATIONS

COOLING CAPACITY (BTUH)

Indoor Units Combinations	Rated System (BtuH)	Indoor Unit A (BtuH)	Indoor Unit B (BtuH)	Indoor Unit C (BtuH)	Indoor Unit D (BtuH)	Indoor Unit E (BtuH)
9+9	19,500	9,000	9,000	NA	NA	NA
9+12	21,000	9,000	12,000	NA	NA	NA
9+18	25,500	8,000	17,500	NA	NA	NA
9+24	26,300	7,000	19,300	NA	NA	NA
12+12	24,000	12,000	12,000	NA	NA	NA
12+18	28,400	11,400	17,000	NA	NA	NA
12+24	32,700	10,000	22,700	NA	NA	NA
18+18	31,680	15,840	15,840	NA	NA	NA
18+24	33,190	14,240	18,950	NA	NA	NA
24+24	35,120	17,560	17,560	NA	NA	NA
9+9+9	24,600	8,200	8,200	8,200	NA	NA
9+9+12	24,900	7,500	7,500	9,900	NA	NA
9+9+18	30,200	7,200	7,200	15,800	NA	NA
9+9+24	34,900	6,600	6,600	21,700	NA	NA
9+12+12	29,600	8,000	10,800	10,800	NA	NA
9+12+18	32,900	7,400	9,800	15,700	NA	NA
9+12+24	36,100	6,800	9,100	20,200	NA	NA
9+18+18	36,100	6,500	14,800	14,800	NA	NA
12+12+12	31,200	10,400	10,400	10,400	NA	NA
12+12+18	35,100	9,960	9,960	15,180	NA	NA
12+12+24	37,500	9,300	9,300	18,900	NA	NA
12+18+18	37,500	8,900	14,300	14,300	NA	NA
9+9+9+9	35,480	8,870	8,870	8,870	8,870	NA
9+9+9+12	36,490	8,460	8,460	8,460	11,110	NA
9+9+9+18	38,350	7,650	7,650	7,650	15,400	NA
9+9+12+12	39,000	8,300	8,300	11,200	11,200	NA
9+9+12+18	39,840	7,470	7,470	9,960	14,940	NA
9+12+12+12	39,280	7,000	10,760	10,760	10,760	NA
9+12+12+18	40,010	6,760	9,600	9,600	14,050	NA
12+12+12+12	39,800	9,950	9,950	9,950	9,950	NA
9+9+9+9+9	39,600	7,920	7,920	7,920	7,920	7,920
9+9+9+9+12	39,700	7,430	7,430	7,430	7,430	9,980

Note:
 1) It is critical to size the outdoor unit for the entire building load and each indoor unit for its individual zone load.
 2) Cooling Nominal Test Conditions: Indoor: 80°F DB/ 67°F WB Outdoor: 95°F DB/ 75°F WB

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OPERATIONAL PERFORMANCE SPECIFICATIONS

HEATING CAPACITY (BTUH)

Indoor Units Combinations	Rated System (BtuH)	Indoor Unit A (BtuH)	Indoor Unit B (BtuH)	Indoor Unit C (BtuH)	Indoor Unit D (BtuH)	Indoor Unit E (BtuH)
9+9	19,000	9,500	9,500	NA	NA	NA
9+12	22,500	9,500	13,000	NA	NA	NA
9+18	27,800	9,300	18,500	NA	NA	NA
9+24	29,600	8,000	21,600	NA	NA	NA
12+12	26,000	13,000	13,000	NA	NA	NA
12+18	29,500	12,000	17,500	NA	NA	NA
12+24	34,800	11,200	23,600	NA	NA	NA
18+18	34,700	17,400	17,300	NA	NA	NA
18+24	37,800	16,200	21,600	NA	NA	NA
24+24	38,400	19,200	19,200	NA	NA	NA
9+9+9	27,000	9,000	9,000	9,000	NA	NA
9+9+12	28,800	9,000	9,000	10,800	NA	NA
9+9+18	35,000	8,800	8,800	17,400	NA	NA
9+9+24	39,600	7,900	7,900	23,800	NA	NA
9+12+12	33,000	9,000	12,000	12,000	NA	NA
9+12+18	36,150	8,650	11,200	16,300	NA	NA
9+12+24	40,940	7,900	10,240	22,800	NA	NA
9+18+18	41,020	7,560	16,730	16,730	NA	NA
12+12+12	36,000	12,000	12,000	12,000	NA	NA
12+12+18	40,100	11,400	11,400	17,300	NA	NA
12+12+24	42,500	10,620	10,620	21,260	NA	NA
12+18+18	42,500	10,130	16,185	16,185	NA	NA
9+9+9+9	44,000	11,000	11,000	11,000	11,000	NA
9+9+9+12	30,780	10,260	10,260	10,260	13,420	NA
9+9+9+18	26,760	8,920	8,920	8,920	18,200	NA
9+9+12+12	32,130	9,630	9,630	12,870	12,870	NA
9+9+12+18	28,500	8,550	8,550	11,400	17,100	NA
9+12+12+12	32,900	8,120	12,390	12,390	12,390	NA
9+12+12+18	29,370	8,010	10,680	10,680	16,200	NA
12+12+12+12	45,880	11,470	11,470	11,470	11,470	NA
9+9+9+9+9	45,500	9,100	9,100	9,100	9,100	9,100
9+9+9+9+12	45,640	8,540	8,540	8,540	8,540	11,480

Note:
 1) It is critical to size the outdoor unit for the entire building load and each indoor unit for its individual zone load.
 2) Cooling Nominal Test Conditions: Indoor: 80°F DB/ 67°F WB Outdoor: 95°F DB/75°F WB

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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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