



MULTI ZONE 21



MULTI ZONE HEAT PUMP SYSTEM

TM18H40		
Performance (Non-Ducted Indoor)		
Cooling Rated Capacity	Btu/h	18,000
Cooling Cap. Range Min-Max	Btu/h	7,000~21,000
SEER/EER		22.0/12.5
Heating Rated Capacity	Btu/h	19,000
Heating Cap. Range Min-Max	Btu/h	8,530~22,600
HSPF/COP		11.0/3.7
Performance (Ducted Indoor)		
Cooling Rated Capacity	Btu/h	18,000
Cooling Cap. Range Min-Max	Btu/h	7,000~21,000
SEER/EER		16.0/11.5
Heating Rated Capacity	Btu/h	19,000
Heating Cap. Range Min-Max	Btu/h	8,530~22,600
HSPF/COP		8.5/3.1
Electrical		
Voltage, Phase, Cycle	V-Ph-Hz	208/230-1-60
Voltage Range	V	187~253
MCA	A	16
MOP	A	25
Compressor RLA	A	10.8
Fan Motor FLA	A	0.6



Piping		
Total Pipe Length	ft	65
Pipe Length to Any Indoor Unit Min-Max	ft	10~33
Max Elevation between Indoor Units	ft	33
Max Lift/Drop from ODU to IDU	ft	33
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	-4~75
System Data		
Compressor Type		DC Inverter Rotary
Refrigerant Type		R410A
Pre-Charge	oz	56.4
Pre-Charge Length	ft	33
Additional Charge	oz/ft	0.21
Refrigerant Control		EXV
ODU Sound Pressure (Cooling/Heating)	dB(A)	56/56
Number of IDUs Min-Max		2-2



Job Name:		Date:	
Reference #:			
Signature:			

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COOLING PERFORMANCE*								
Outdoor Ambient DB	Indoor Ambient Temperature							
	68°F DB		73°F DB		80°F DB		82°F DB	
	57°F WB		61°F WB		67°F WB		68°F WB	
	TC	SHC	TC	SHC	TC	SHC	TC	SHC
0°F	13,677	10,727	14,550	11,407	16,644	13,055	16,977	13,316
5°F	14,100	11,061	15,000	11,760	17,159	13,461	17,674	13,865
14°F	14,837	11,637	15,674	12,288	17,690	13,874	18,403	14,432
23°F	15,194	11,919	16,252	12,748	18,621	14,605	19,425	15,236
32°F	16,105	12,629	17,317	13,579	19,601	15,370	20,659	16,200
41°F	17,131	13,434	18,421	14,446	20,632	16,180	22,077	17,313
50°F	16,970	13,310	18,248	14,312	20,228	15,865	21,846	17,135
59°F	16,929	13,277	18,107	14,201	19,831	15,549	21,649	16,979
68°F	17,124	13,430	18,194	14,267	19,442	15,249	20,869	16,369
77°F	16,436	12,893	17,464	13,698	19,061	14,951	20,423	16,018
86°F	16,053	12,589	17,121	13,430	18,687	14,656	20,022	15,702
95°F	15,640	12,267	16,733	13,120	18,321	14,370	20,000	15,687
104°F	15,079	11,826	16,180	12,691	18,080	14,183	19,490	15,286
113°F	14,689	11,519	15,797	12,384	17,696	13,876	19,107	14,985
115°F	14,305	11,219	15,407	12,083	17,312	13,575	18,723	14,684

HEATING PERFORMANCE*				
Outdoor Ambient DB	Indoor Ambient Temperature			
	68°F DB	73°F DB	80°F DB	86°F DB
	TC	TC	TC	TC
-4°F	12,845	12,628	12,397	12,119
0°F	13,918	13,687	13,424	13,123
6°F	14,683	14,436	14,165	13,841
10°F	15,293	15,038	14,753	14,420
16°F	15,757	15,494	15,193	14,853
19°F	16,058	15,795	15,486	15,139
24°F	17,051	16,793	16,506	16,174
32°F	17,533	17,296	17,032	16,726
41°F	18,041	17,829	17,580	17,299
43°F	18,527	18,309	18,066	17,785
47°F	19,392	19,056	18,672	18,228
53°F	19,584	19,242	18,858	18,408
59°F	20,034	19,680	19,284	18,828
64°F	20,460	20,100	19,698	19,230
70°F	20,844	20,484	20,070	19,596
75°F	21,138	20,766	20,352	19,866

LEGEND TC --- Total Net Cooling Capacity (BtuH)
 DB --- Dry Bulb SC --- Sensible Capacity (BtuH)
 WB --- Wet Bulb Input Power---(Watts)

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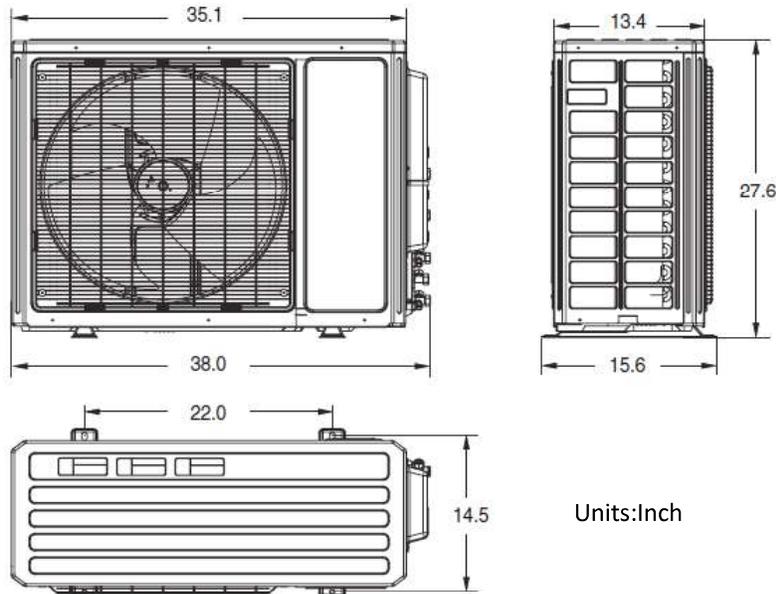


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OUTDOOR UNIT DIMENSIONAL SPECIFICATIONS



Suction/Gas Line Port Size

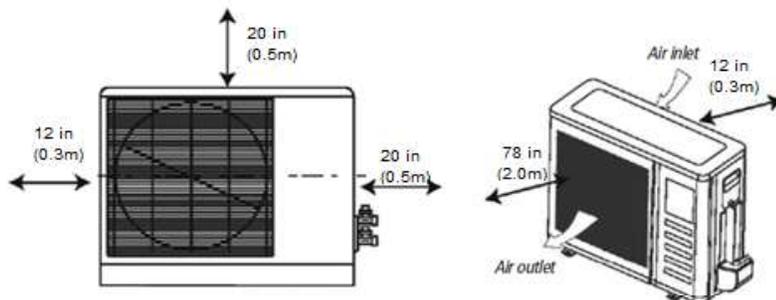
Port A	3/8-in OD Flared
Port B	3/8-in OD Flared

Liquid Line Port Size

Port A	1/4-in OD Flared
Port B	1/4-in OD Flared

Factory Supplied Piping Adapters

Adapter	P/N	Qty
3/8 (F) to 1/2 (M)	6654100013	2



Minimum Spacing Requirements

Units: inch (m)

Notes:

1. Recommended Interconnecting Cable Type Stranded Copper Conductors THHN 600V Unshielded Wire
2. Power wiring cable size must comply with applicable national and local codes.
3. Test conditions are based on AHRI 210/240.

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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

HEATING 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	19,000	9,500	9,500	NA	NA
9K+12K	22,500	9,500	13,000	NA	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

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MULTI ZONE HEAT PUMP SYSTEM

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
		CFM				
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	54/49/46/43/40/37/34/27
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(6824~30708)
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	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	Indoor	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



DUCTED INDOOR UNIT

LOW-STATIC DUCT TYPE INDOOR UNIT

Model			TM09HFDI	TM12HFDI	TM18HFDI	TM21HFDI	TM24HFDI
Capacity	Cooling	Btu/h	8500	11900	15700	20400	22800
	Heating	Btu/h	9550	13100	18700	22600	27400
Power Supply		Ph/V/Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz
Airflow Volume		m³/h	450	550	700	1000	1000
Sound Pressure Level	Indoor	dB(A)	37/31	39/32	41/33	42/34	42/34
Net Weight/Gross Weight		Kg	22/27	23/29	27/36	31/41	31/41
Piping Connection	Liquid	inch	1/4	1/4	1/4	3/8	3/8
	Gas	inch	3/8	3/8	1/2	5/8	5/8
Loading Quantity	20'GP	sets	108	108	90	72	72
	40'HP/40'HQ	sets	234/234	234/234	192/192	162/162	162/162
Dimension(WxHxD)	Outline	inch	27-1/2x24-1/4x7-7/8	27-1/2x24-1/4x7-7/8	35-3/8x24-1/4x7-7/8	43-1/4x24-1/4x7-7/8	43-1/4x24-1/4x7-7/8
	Package	inch	35-1/8x29-1/4x12	35-1/8x29-1/4x12	44-1/4x29-1/4x12	52-1/8x29-1/4x12	52-1/8x29-1/4x12

HIGH-STATIC DUCT TYPE INDOOR UNIT

Model			TM09HSFDI	TM12HSFDI	TM18HSFDI	TM24HSFDI
Capacity	Cooling	Btu/h	9000	12000	18000	24000
	Heating	Btu/h	9500	13000	19000	27000
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	430/360/320	490/420/360	700/530/490	950/770/690
Sound Pressure Level	Indoor	dB(A)	36/30/27/25	38/33/29/26	39/33/29/26	42/36/32/28
Net Weight/Gross Weight		Kg	32/38	32/38	42/48.5	42/48.5
Piping Connection	Liquid	inch	1/4	1/4	3/8	3/8
	Gas	inch	3/8	1/2	5/8	5/8
Loading Quantity	20'GP	sets	84	84	66	66
	40'HP/40'HQ	sets	168/196	168/196	138/161	138/161
Dimension(WxHxD)	Outline	inch	32-5/8x29-5/8x11-3/4	32-5/8x29-5/8x11-3/4	44-1/2x29-5/8x11-3/4	44-1/2x29-5/8x11-3/4
	Package	inch	35-3/8x31-3/4x14-1/8	35-3/8x31-3/4x14-1/8	47-1/2x32x14-1/8	47-1/2x32x14-1/8