



## MULTI ZONE 21



### MULTI ZONE HEAT PUMP SYSTEM



<b>TM42H30</b>		
<b>Performance (Non-Ducted Indoor)</b>		
Cooling Rated Capacity	Btu/h	39,000
Cooling Cap. Range Min-Max	Btu/h	8,871~40,944
SEER/EER		21.0/10.4
Heating Rated Capacity	Btu/h	45,000
Heating Cap. Range Min-Max	Btu/h	8,871~40,062
HSPF/COP		10.2/3.6
<b>Performance (Ducted Indoor)</b>		
Cooling Rated Capacity	Btu/h	39,500
Cooling Cap. Range Min-Max	Btu/h	13,800~42,800
SEER/EER		14.7/9.8
Heating Rated Capacity	Btu/h	46,500
Heating Cap. Range Min-Max	Btu/h	7,500~47,000
HSPF/COP		9.6/3.1
<b>Electrical</b>		
Voltage, Phase, Cycle	V-Ph-Hz	208/230-1-60
Voltage Range	V	187~253
MCA	A	24
MOP	A	40
Compressor RLA	A	17.8
Fan Motor FLA	A	0.8

<b>Piping</b>		
Total Pipe Length	ft	246
Pipe Length to Any Indoor Unit Min-Max	ft	10~82
Max Elevation between Indoor Units	ft	25
Max Lift/Drop from ODU to IDU	ft	49
Liquid Line	in	1/4
Vapor Line	in	3/8
Connection Type		Flared
<b>Operating Range</b>		
Cooling Outdoor DB	°F	0~118
Heating Outdoor DB	°F	-4~86
<b>System Data</b>		
Compressor Type		DC Inverter Rotary
Refrigerant Type		R410A
Pre-Charge	oz	128.8
Pre-Charge Length	ft	131
Additional Charge	oz/ft	0.21
Refrigerant Control		EXV
ODU Sound Pressure (Cooling/Heating)	dB(A)	61/61
Number of IDUs Min-Max		2-5



Job Name:		Date:	
Reference #:			
Signature:			

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# MULTI ZONE 21

<b>COOLING PERFORMANCE*</b>								
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	SC	TC	SC	TC	SC	TC	SC
0°F	25,806	20,239	27,453	21,523	31,403	24,631	32,031	25,123
5°F	26,604	20,869	28,302	22,188	32,375	25,398	33,346	26,160
14°F	27,994	21,955	29,573	23,185	33,376	26,177	34,722	27,229
23°F	28,667	22,487	30,662	24,052	35,133	27,555	36,650	28,746
32°F	30,386	23,827	32,673	25,621	36,982	28,999	38,979	30,565
41°F	32,322	25,347	34,755	27,255	38,928	30,528	41,653	32,665
50°F	32,018	25,113	34,428	27,003	38,165	29,934	41,218	32,328
59°F	31,940	25,050	34,163	26,793	37,416	29,338	40,845	32,035
68°F	32,308	25,339	34,327	26,919	36,683	28,771	39,375	30,884
77°F	31,011	24,326	32,949	25,844	35,964	28,209	38,532	30,221
86°F	30,289	23,752	32,303	25,340	35,258	27,653	37,777	29,625
95°F	29,509	23,144	31,571	24,755	34,567	27,112	37,736	29,598
104°F	28,450	22,314	30,528	23,945	34,112	26,760	36,773	28,841
113°F	27,714	21,734	29,804	23,366	33,388	26,180	36,050	28,273
115°F	26,991	21,167	29,069	22,798	32,664	25,613	35,326	27,706

<b>HEATING PERFORMANCE*</b>				
Outdoor Ambient DB	Indoor Ambient Temperature			
	68°F DB	73°F DB	80°F DB	86°F DB
	TC	TC	TC	TC
-4°F	30,105	29,598	29,055	28,403
0°F	32,621	32,078	31,463	30,757
6°F	34,413	33,834	33,200	32,440
10°F	35,843	35,246	34,576	33,798
16°F	36,930	36,314	35,608	34,812
19°F	37,636	37,020	36,296	35,481
24°F	39,964	39,359	38,685	37,908
32°F	41,094	40,538	39,918	39,202
41°F	42,283	41,786	41,202	40,545
43°F	43,422	42,911	42,341	41,684
47°F	45,450	44,663	43,763	42,722
53°F	45,900	45,098	44,198	43,144
59°F	46,955	46,125	45,197	44,128
64°F	47,953	47,109	46,167	45,070
70°F	48,853	48,009	47,039	45,928
75°F	49,542	48,670	47,700	46,561

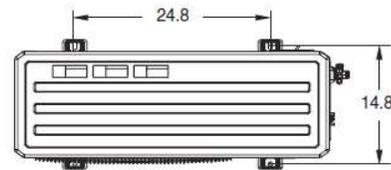
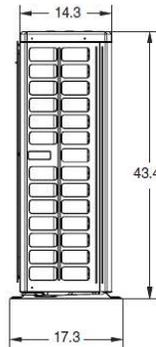
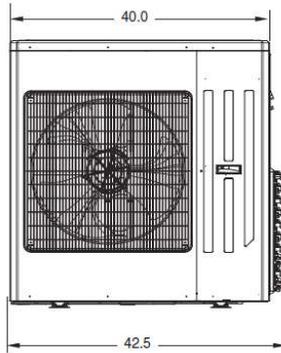
LEGEND TC --- Total Net Cooling Capacity (BtuH)  
 DB --- Dry Bulb SC --- Sensible Capacity (BtuH)  
 Input Power---(Watts)

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#### OUTDOOR UNIT DIMENSIONAL SPECIFICATIONS

#### 42,000 BTUH MODE



Units:Inch

#### Suction/Gas Line Port Size

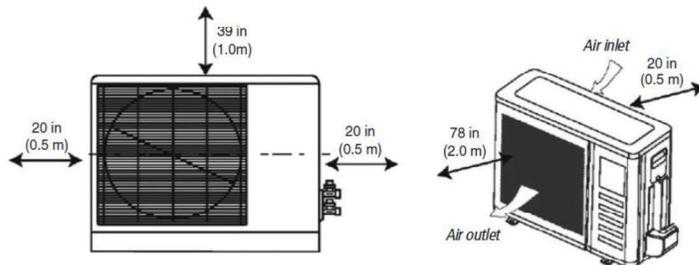
Port A	3/8-in OD Flared
Port B	3/8-in OD Flared
Port C	3/8-in OD Flared
Port D	3/8-in OD Flared
Port E	3/8-in OD Flared

#### 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	2
3/8 (F) to 1/2 (M)	6654100013	4
1/4 (F) to 3/8 (M)	6654104	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.



**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. Cooling Nominal Test Conditions: Indoor: 80°F DB/67°F WB Outdoor: 95°F DB/75°F WB



**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	32,500	9,500	9,500	NA	NA	NA
9+12	35,500	9,500	13,000	NA	NA	NA
9+18	46,300	9,300	18,500	NA	NA	NA
9+24	51,200	8,000	21,600	NA	NA	NA
12+12	39,000	13,000	13,000	NA	NA	NA
12+18	47,000	12,000	17,500	NA	NA	NA
12+24	58,400	11,200	23,600	NA	NA	NA
18+18	52,000	17,400	17,300	NA	NA	NA
18+24	59,400	16,200	21,600	NA	NA	NA
24+24	57,600	19,200	19,200	NA	NA	NA
9+9+9	36,000	9,000	9,000	9,000	NA	NA
9+9+12	37,800	9,000	9,000	10,800	NA	NA
9+9+18	43,800	8,800	8,800	17,400	NA	NA
9+9+24	47,500	7,900	7,900	23,800	NA	NA
9+12+12	45,000	9,000	12,000	12,000	NA	NA
9+12+18	47,350	8,650	11,200	16,300	NA	NA
9+12+24	51,180	7,900	10,240	22,800	NA	NA
9+18+18	57,750	7,560	16,730	16,730	NA	NA
12+12+12	48,000	12,000	12,000	12,000	NA	NA
12+12+18	51,500	11,400	11,400	17,300	NA	NA
12+12+24	53,120	10,620	10,620	21,260	NA	NA
12+18+18	58,685	10,130	16,185	16,185	NA	NA
9+9+9+9	55,000	11,000	11,000	11,000	11,000	NA
9+9+9+12	54,460	10,260	10,260	10,260	13,420	NA
9+9+9+18	53,880	8,920	8,920	8,920	18,200	NA
9+9+12+12	54,630	9,630	9,630	12,870	12,870	NA
9+9+12+18	54,150	8,550	8,550	11,400	17,100	NA
9+12+12+12	57,680	8,120	12,390	12,390	12,390	NA
9+12+12+18	56,250	8,010	10,680	10,680	16,200	NA
12+12+12+12	57,350	11,470	11,470	11,470	11,470	NA
9+9+9+9+9	54,600	9,100	9,100	9,100	9,100	9,100
9+9+9+9+12	54,180	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 it's individual zone load. Cooling Nominal Test Conditions: Indoor: 80°F DB/67°F WB Outdoor: 95°F DB/75°F WB

## MULTI ZONE 21

### 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



## MULTI ZONE 21



### MULTI ZONE HEAT PUMP SYSTEM

#### 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

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