



MULTI ZONE 21



MULTI ZONE HEAT PUMP SYSTEM

TM30H40		
Performance (Non-Ducted Indoor)		
Cooling Rated Capacity	Btu/h	28,400
Cooling Cap. Range Min-Max	Btu/h	8,189 ~33,438
SEER/EER		21.0/12.5
Heating Rated Capacity	Btu/h	30,000
Heating Cap. Range Min-Max	Btu/h	8,189~32,500
HSPF/COP		11.5/3.7
Performance (Ducted Indoor)		
Cooling Rated Capacity	Btu/h	28,400
Cooling Cap. Range Min-Max	Btu/h	6,200~30,800
SEER/EER		16.0/10.5
Heating Rated Capacity	Btu/h	30,000
Heating Cap. Range Min-Max	Btu/h	6,500~32,500
HSPF/COP		8.5/3.3
Electrical		
Voltage, Phase, Cycle	V-Ph-Hz	208/230-1-60
Voltage Range	V	187~253
MCA	A	20
MOP	A	30
Compressor RLA	A	13.9
Fan Motor FLA	A	0.7



Piping		
Total Pipe Length	ft	230
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
Operating Range		
Cooling Outdoor DB	°F	0~118
Heating Outdoor DB	°F	-4~86
System Data		
Compressor Type		DC Inverter Rotary
Refrigerant Type		R410A
Pre-Charge	oz	98.7
Pre-Charge Length	ft	131
Additional Charge	oz/ft	0.21
Refrigerant Control		EXV
ODU Sound Pressure (Cooling/Heating)	dB(A)	59/59
Number of IDUs Min-Max		2-4



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	SC	TC	SC	TC	SC	TC	SC
0°F	22,103	17,335	23,514	18,434	26,897	21,096	27,435	21,518
5°F	22,786	17,875	24,241	19,005	27,729	21,754	28,561	22,406
14°F	23,977	18,805	25,330	19,858	28,587	22,421	29,739	23,322
23°F	24,553	19,260	26,263	20,601	30,091	23,601	31,391	24,621
32°F	26,026	20,408	27,985	21,944	31,675	24,838	33,386	26,179
41°F	27,684	21,710	29,768	23,344	33,342	26,147	35,676	27,978
50°F	27,424	21,510	29,488	23,129	32,689	25,639	35,304	27,690
59°F	27,357	21,456	29,261	22,949	32,048	25,128	34,984	27,438
68°F	27,672	21,703	29,401	23,056	31,419	24,642	33,725	26,453
77°F	26,561	20,835	28,222	22,136	30,803	24,161	33,003	25,885
86°F	25,942	20,344	27,668	21,704	30,199	23,685	32,356	25,374
95°F	25,275	19,823	27,041	21,203	29,607	23,222	32,321	25,351
104°F	24,368	19,112	26,147	20,509	29,217	22,920	31,497	24,702
113°F	23,738	18,616	25,527	20,013	28,597	22,424	30,877	24,216
115°F	23,118	18,129	24,897	19,527	27,977	21,938	30,257	23,730

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	21,140	20,784	20,403	19,945
0°F	22,907	22,526	22,094	21,598
6°F	24,166	23,759	23,314	22,780
10°F	25,170	24,751	24,280	23,734
16°F	25,933	25,501	25,005	24,445
19°F	26,429	25,996	25,488	24,916
24°F	28,064	27,639	27,166	26,620
32°F	28,857	28,466	28,031	27,529
41°F	29,692	29,343	28,933	28,472
43°F	30,492	30,133	29,733	29,272
47°F	31,916	31,363	30,731	30,000
53°F	32,232	31,669	31,037	30,297
59°F	32,973	32,390	31,738	30,988
64°F	33,674	33,081	32,420	31,649
70°F	34,306	33,713	33,032	32,252
75°F	34,790	34,177	33,496	32,696

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

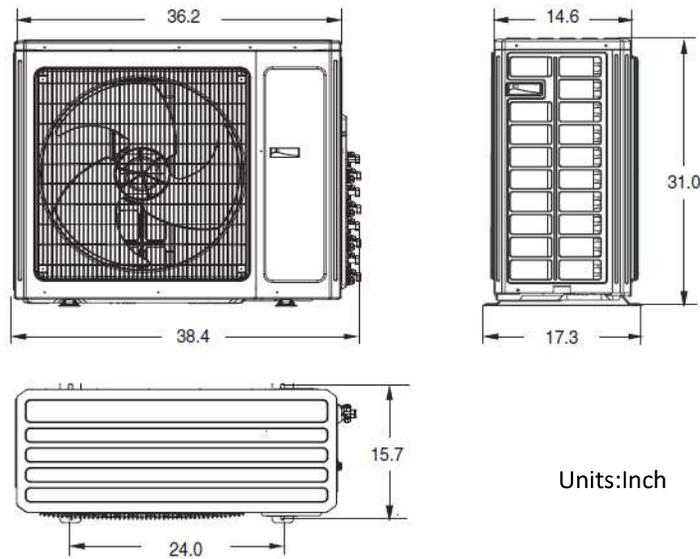
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MULTI ZONE 21

OUTDOOR UNIT DIMENSIONAL SPECIFICATIONS

30,000 BTUH MODE



Units:Inch

Suction/Gas Line Port Size

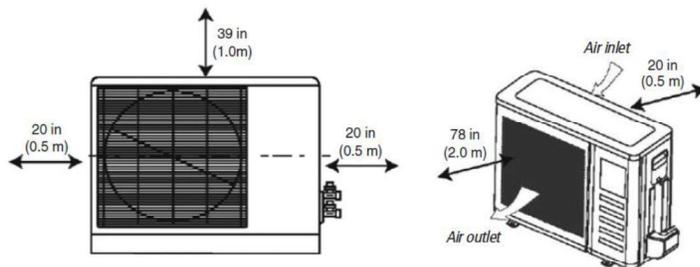
Port A	3/8-in OD Flared
Port B	3/8-in OD Flared
Port C	3/8-in OD Flared
Port D	3/8-in OD Flared

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

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.

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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)
9+9	18,000	9,000	9,000	NA	NA
9+12	21,000	9,000	12,000	NA	NA
9+18	22,950	7,650	15,300	NA	NA
9+24	27,780	7,380	20,400	NA	NA
12+12	24,000	12,000	12,000	NA	NA
12+18	25,500	10,200	15,300	NA	NA
12+24	28,860	9,420	19,440	NA	NA
18+18	28,360	14,180	14,180	NA	NA
18+24	29,100	12,000	17,100	NA	NA
9+9+9	25,500	8,500	8,500	8,500	NA
9+9+12	26,200	8,000	8,000	10,200	NA
9+9+18	29,800	7,650	7,650	14,500	NA
9+9+24	29,800	6,300	6,300	17,200	NA
9+12+12	28,200	8,200	10,000	10,000	NA
9+12+18	29,600	7,000	8,600	14,000	NA
12+12+12	28,500	9,500	9,500	9,500	NA
12+12+18	30,200	8,600	8,600	13,000	NA
9K + 9K + 9K + 9K	29,600	7,400	7,400	7,400	7,400
9K + 9K + 9K + 12K	29,700	7,100	7,100	7,100	8,400
9K + 9K + 12K + 12K	29,600	6,800	6,800	8,000	8,000

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



OPERATIONAL PERFORMANCE SPECIFICATIONS

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)
9+9	19,000	9,500	9,500	NA	NA
9+12	22,500	9,500	13,000	NA	NA
9+18	25,380	8,460	16,920	NA	NA
9+24	30,840	8,280	22,560	NA	NA
12+12	26,000	13,000	13,000	NA	NA
12+18	28,200	11,280	16,920	NA	NA
12+24	29,900	9,900	20,000	NA	NA
18+18	30,200	15,100	15,100	NA	NA
18+24	31,800	13,300	18,500	NA	NA
9+9+9	28,500	9,500	9,500	9,500	NA
9+9+12	28,800	8,800	8,800	11,200	NA
9+9+18	31,100	7,900	7,900	15,300	NA
9+9+24	31,500	6,750	6,750	18,000	NA
9+12+12	28,900	8,500	10,200	10,200	NA
9+12+18	30,700	7,200	9,000	14,500	NA
12+12+12	29,700	9,900	9,900	9,900	NA
12+12+18	31,500	9,000	9,000	13,500	NA
9K + 9K + 9K + 9K	30,800	7,700	7,700	7,700	7,700
9K + 9K + 9K + 12K	31,300	7,300	7,300	7,300	9,400
9K + 9K + 12K + 12K	31,600	6,800	6,800	9,000	9,000

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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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