



MULTI ZONE 21



MULTI ZONE HEAT PUMP SYSTEM



TM36H40		
Performance (Non-Ducted Indoor)		
Cooling Rated Capacity	Btu/h	34,000
Cooling Cap. Range Min-Max	Btu/h	8,871~35,826
SEER/EER		21.0/12.5
Heating Rated Capacity	Btu/h	42,500
Heating Cap. Range Min-Max	Btu/h	8,871~44,356
HSPF/COP		11.5/3.7
Performance (Ducted Indoor)		
Cooling Rated Capacity	Btu/h	34,000
Cooling Cap. Range Min-Max	Btu/h	13,400~37,000
SEER/EER		16.0/11.5
Heating Rated Capacity	Btu/h	42,500
Heating Cap. Range Min-Max	Btu/h	7,231~44,745
HSPF/COP		8.5/3.0
Electrical		
Voltage, Phase, Cycle	V-Ph-Hz	208/230-1-60
Voltage Range	V	187~253
MCA	A	23
MOP	A	35
Compressor RLA	A	15.6
Fan Motor FLA	A	0.8

Piping		
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
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	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:			

TOSOT NORTH AMERICA
 930 W 21ST STREET, CHICAGO IL 60608
 TEL: +1(312)800-8455
 EMAIL: TOSOTNA@GMAIL.COM



MULTI ZONE 21

MULTI ZONE HEAT PUMP SYSTEM

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	36,688	28,774	39,030	30,599	44,647	35,018	45,539	35,718
5°F	37,437	29,367	39,827	31,223	45,558	35,740	46,924	36,813
14°F	38,991	30,580	41,191	32,293	46,487	36,461	48,362	37,926
23°F	38,706	30,362	41,401	32,475	47,436	37,205	49,485	38,813
32°F	39,772	31,187	42,765	33,534	48,404	37,956	51,018	40,006
41°F	38,276	30,017	41,157	32,276	46,099	36,152	49,326	38,682
50°F	36,833	28,890	39,606	31,064	43,904	34,435	47,416	37,190
59°F	35,694	27,994	38,178	29,942	41,813	32,785	45,645	35,799
68°F	35,073	27,508	37,265	29,223	39,822	31,233	42,745	33,527
77°F	32,703	25,653	34,747	27,255	37,926	29,748	40,635	31,871
86°F	31,029	24,333	33,093	25,959	36,120	28,328	38,700	30,349
95°F	29,366	23,032	31,419	24,635	34,400	26,981	37,553	29,455
104°F	28,312	22,206	30,380	23,830	33,947	26,630	36,596	28,702
113°F	27,580	21,629	29,660	23,253	33,227	26,054	35,875	28,137
115°F	26,860	21,064	28,928	22,688	32,506	25,489	35,155	27,572

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	28,432	27,954	27,441	26,825
0°F	30,809	30,296	29,715	29,048
6°F	32,501	31,954	31,356	30,638
10°F	33,852	33,288	32,655	31,920
16°F	34,878	34,297	33,630	32,878
19°F	35,545	34,963	34,280	33,510
24°F	37,744	37,173	36,536	35,802
32°F	38,811	38,286	37,700	37,024
41°F	39,934	39,465	38,913	38,293
43°F	41,009	40,527	39,989	39,368
47°F	42,925	42,181	41,331	40,348
53°F	43,350	42,593	41,743	40,747
59°F	44,346	43,563	42,686	41,677
64°F	45,289	44,492	43,602	42,566
70°F	46,139	45,342	44,426	43,377
75°F	46,790	45,966	45,050	43,974

LEGEND

DB --- Dry Bulb

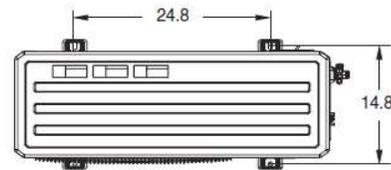
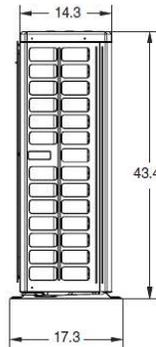
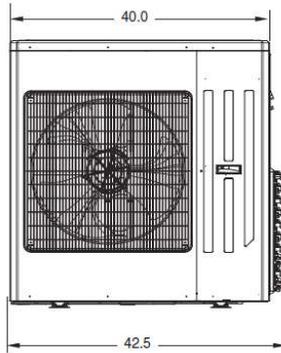
WB --- Wet Bulb

TOSOT NORTH AMERICA
 930 W 21ST STREET, CHICAGO IL 60608
 TEL: +1(312)800-8455
 EMAIL: SALES@TOSOT-NA.COM



OUTDOOR UNIT DIMENSIONAL SPECIFICATIONS

36,000 BTUH MODE



Units:Inch

Suction/Gas Line Port Size

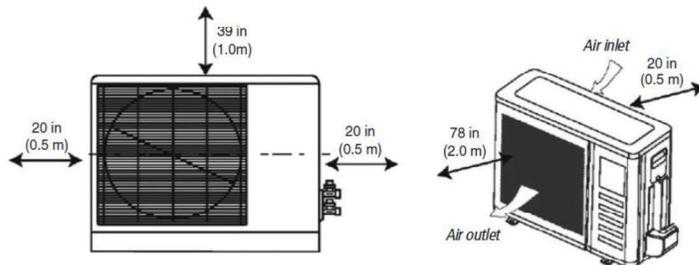
Port A	3/8-in OD Flared
Port B	3/8-in OD Flared
Port C	3/8-in OD Flared
Port D	3/8-in OD Flared
Port E	3/8-in OD Flared

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.



MULTI ZONE 21

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)	Indoor Unit E (BtuH)
9+9	18,000	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	30,000	10,000	20,000	NA	NA	NA
18+18	30,600	15,300	15,300	NA	NA	NA
18+24	33,100	14,200	18,900	NA	NA	NA
24+24	33,600	16,800	16,800	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	29,700	7,200	7,200	15,300	NA	NA
9+9+24	30,900	6,600	6,600	17,700	NA	NA
9+12+12	29,600	8,000	10,800	10,800	NA	NA
9+12+18	31,900	7,400	9,800	14,700	NA	NA
9+12+24	34,100	6,800	9,100	18,200	NA	NA
9+18+18	33,900	6,500	13,700	13,700	NA	NA
12+12+12	31,200	10,400	10,400	10,400	NA	NA
12+12+18	32,720	9,360	9,360	14,000	NA	NA
12+12+24	32,900	8,300	8,300	16,300	NA	NA
12+18+18	32,760	8,160	12,300	12,300	NA	NA
9+9+9+9	34,000	8,500	8,500	8,500	8,500	NA
9+9+9+12	34,290	7,830	7,830	7,830	10,800	NA
9+9+9+18	34,072	6,824	6,824	6,824	13,600	NA
9+9+12+12	34,040	7,300	7,300	9,720	9,720	NA
9+9+12+18	34,600	6,500	6,500	8,640	12,960	NA
9+12+12+12	34,440	6,840	9,200	9,200	9,200	NA
12+12+12+12	35,040	8,760	8,760	8,760	8,760	NA
9+9+9+9+9	27,600	6,900	6,900	6,900	6,900	6,900
9+9+9+9+12	32,640	6,500	6,500	6,500	6,500	6,640

Capacity data is based on the following conditions :

Cooling Nominal Test Conditions

Heating Nominal Test Conditions

Indoor: 80°F DB/67°F WB

Indoor: 70°F DB/60°F WB

Outdoor: 95°F DB/75°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)	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	33,200	11,200	22,000	NA	NA	NA
18+18	35,000	17,500	17,500	NA	NA	NA
18+24	36,000	15,000	21,000	NA	NA	NA
24+24	38,000	19,000	19,000	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	36,600	7,800	7,800	21,000	NA	NA
9+12+12	33,000	9,000	12,000	12,000	NA	NA
9+12+18	35,150	8,650	11,200	15,300	NA	NA
9+12+24	37,640	7,900	9,240	20,500	NA	NA
9+18+18	37,960	7,560	15,200	15,200	NA	NA
12+12+12	36,000	12,000	12,000	12,000	NA	NA
12+12+18	37,200	10,600	10,600	16,000	NA	NA
12+12+24	38,000	9,500	9,500	19,000	NA	NA
12+18+18	38,300	9,300	14,500	14,500	NA	NA
9+9+9+9	42,000	10,500	10,500	10,500	10,500	NA
9+9+9+12	42,000	9,600	9,600	9,600	13,200	NA
9+9+9+18	41,940	8,400	8,400	8,400	16,740	NA
9+9+12+12	42,000	9,000	9,000	12,000	12,000	NA
9+9+12+18	42,680	8,000	8,000	10,680	16,000	NA
9+12+12+12	40,800	8,100	10,900	10,900	10,900	NA
12+12+12+12	42,720	10,680	10,680	10,680	10,680	NA
9+9+9+9+9	42,750	8,550	8,550	8,550	8,550	8,550
9+9+9+9+12	42,240	7,920	7,920	7,920	7,920	10,560

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.

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

TOSOT NORTH AMERICA
 930 W 21ST STREET, CHICAGO IL 60608
 TEL: +1(312)800-8455
 EMAIL: SALES@TOSOT-NA.COM