

TOSOT

MULTI-ROOM DUCTLESS HEAT-PUMP SYSTEMS

24000 BTU / H WALL MOUNTED HEAT- PUMP SYSTEM

SUBMITTAL DATA: TM24H40

Job Name	Location	Date
Purchaser	Engineer	
Submitted To	For	<input type="checkbox"/> Reference <input type="checkbox"/> Approval <input type="checkbox"/> Construction
Unit Designation	Schedule No.	

**AHRI CERTIFIED REF
10064019 (NON-DUCTED) &
10064020 (DUCTED)**



SYSTEM RATINGS		OUTDOOR UNIT DATA	
Non-Ducted Indoor		Compressor	
Rated Cooling Capacity	24,000 BTUH	Type	DC Inverter Driven Rotary
Cooling Capacity (min-max)	7,500-33,000 BTUH	RLA	15.8 A
Rated Heating Capacity	26,000 BTUH	Compressor Crankcase and Base Pan Heaters included	
Heating Capacity (min-max)	7,500-35,000 BTUH	Fan Motor	
SEER/EER	21.0/12.5	Output Power	90 W
HSPF/COP	11.0/3.7	FLA	0.6 A
Ducted Indoor		Air Flow (Max)	2354 CFM
Rated Cooling Capacity	24,000 BUTH	Sound Pressure Level	
Cooling Capacity (min-max)	7,500-33,000 BTUH	Cooling	59 db(A)
Rated Heating Capacity	26,000 BTUH	Heating	59 db(A)
Heating Capacity (min-max)	7,500-35,000 BTUH	Dimensions & Weights	
SEER/EER	16.0/10.5	Unit Dimensions (LxHxD)	38.6 x 31.1 x 17.3 -in
HSPF/COP	8.5/3.2	Weight (Net/Shipping)	152.9/163.9 LBS
Operating Range		Min. Number of Indoor Units	1
Cooling (min-max)	0 ~ 118°F	Max. Number of Indoor Units	3
	-18 ~ 48°C	REFRIGERANT PIPING DATA	
Heating (min-max)	-5 ~ 75°F	Refrigerant Type	R410A
	-21 ~ 24°C	Refrigerant Charge	77.6 oz
Power Supply		Additional Charge Per Line Length	0.21-oz/ft
Normal Operational Voltage	208/230 V, 1 Phase, 60 Hz	Connection Method	Flared
Voltage Range	187 - 253 V	Factory Charge for Total Line Length	98-ft
Main Power Wire Size	10-2 AWG	Total Refrigerant Pipe Length	197-ft
Interconnecting Cable Wire Size	14-4 AWG	Max Refrigerant Piping Length to any Indoor Unit	65-ft
MCA	23 A	Min Refrigerant Piping Length to any Indoor Unit	10-ft
MOCP/Breaker Size	30 A	Max Elevation between Indoor Units	33-ft
		Max Lift from Outdoor to Indoor Unit	33-ft
		Max Drop from Outdoor to Indoor Unit	33-ft

GENERAL FEATURES

- Up to 3 Indoor Units(3-Port)
- EnergyStar Rated
- G10 DC Inverter Technology
- Quiet Operation - Both Indoor & Outdoor
- Acrylic Resin/Anti-Corrosion Coil Protection
- Intelligent Defrost
- Auto Restart on Power Outages
- Multi-point Diagnostics

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FEATURES & FUNCTION SUMMARY: TM24H40

SYSTEM FEATURES	
Inverter Type	G10
Ultra Low Frequency Torque Control	YES
Power Factor Correction	YES
Compressor Type	Inverter Rotary
Refrigerant Type	R410A
Basepan With Electric Heater	YES
Compressor With Electric Heater	YES
Condenser Fan	Axial
Condenser Motor Type	DC
Condenser Motor Drive	Direct
Condenser Coil	Aluminum Fin/Copper Tube
Outdoor Fin Coating (Blue)	Acrylic Resin
Intelligent Defrosting	YES
Low Voltage Startup	YES
Memory/Power Failure Recovery	YES
Self Diagnosis	YES
Low Ambient Cooling	YES
XK19 Wired Controller Interface	YES
REMOTE CONTROLLER FUNCTIONS	See individual Indoor Unit Controllers Functions
XK19 WIRED CONTROLLER FUNCTIONS ²	
On/Off	YES
Operating Mode	YES
Fan Speed	YES
Room Setpoint	YES
Model Numbers	YES
Timer Mode	YES
Sleep Mode	YES
Turbo Mode	YES
X-Fan Mode	YES
Privacy Lock	YES

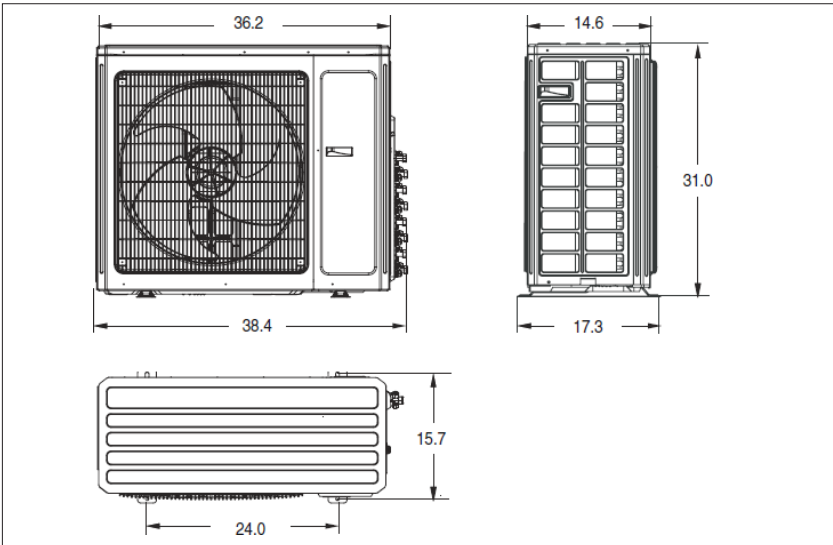
Note: Some indoor models may not support specific system features or functions.

DIMENSIONAL SPECIFICATIONS: TM24H40

24,000 BTUH MODEL

Model # TM24H40 24,000 BTUH 230V

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

Liquid Line Port Size

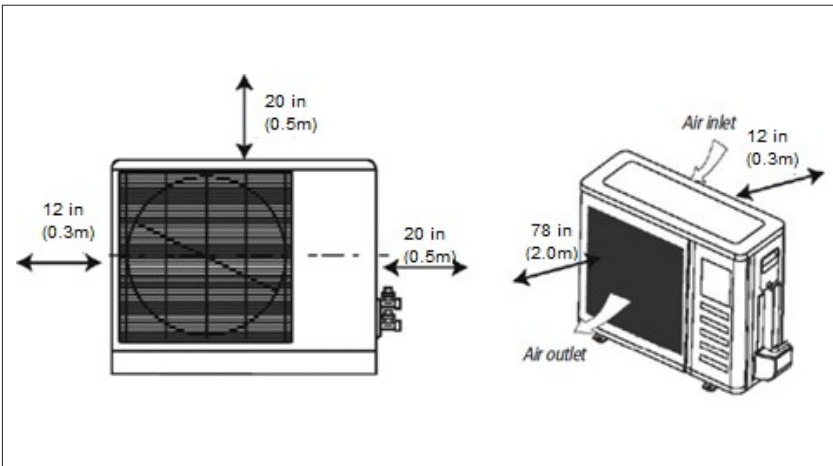
Port A	1/4-in OD Flared
Port B	1/4-in OD Flared
Port C	1/4-in OD Flared

Factory Supplied Piping Adapters

Adapter	P/N	Qty
3/8 (F) to 1/2 (M)	6643008	3
3/8 (F) to 5/8 (M)	6654100009	2

MINIMUM SPACING REQUIREMENTS

Units: inch



Notes:

1. Recommended Interconnecting Cable Type 14 AWG 4 Stranded Copper Conductors 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: TM24H40

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
9K + 18K	25,000	8,400	16,600	NA	NA
12K + 12K	24,000	12,000	12,000	NA	NA
12K + 18K	25,000	10,000	15,000	NA	NA
18K + 18K	25,500	12,750	12,750	NA	NA
9K + 9K + 9K	26,001	8,667	8,667	8,667	NA
9K + 9K + 12K	26,000	8,000	8,000	10,000	NA
9K + 9K + 18K	26,000	7,000	7,000	12,000	NA
9K + 12K + 12K	26,000	6,000	10,000	10,000	NA
12K + 12K + 12K	26,001	8,667	8,667	8,667	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
9K + 18K	27,000	9,000	18,000	NA	NA
12K + 12K	26,000	13,000	13,000	NA	NA
12K + 18K	28,000	11,200	16,800	NA	NA
18K + 18K	28,500	14,250	14,250	NA	NA
9K + 9K + 9K	29,001	9,667	9,667	9,667	NA
9K + 9K + 12K	29,000	9,000	9,000	11,000	NA
9K + 9K + 18K	29,000	6,000	6,000	17,000	NA
9K + 12K + 12K	29,000	6,000	11,500	11,500	NA
12K + 12K + 12K	29,001	9,667	9,667	9,667	NA

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

EXTENDED RATINGS: TM18H40

COOLING PERFORMANCE													
DB WB		Indoor Ambient Temperature											
		70°F (21°C)			75°F (24°C)			80°F (27°C)			90°F (32°C)		
		59°F (15°C)			63°F (17°C)			67°F (19°C)			73°F (23°C)		
		TC (BtuH)	SC (BtuH)	Input Power (watts)	TC (BtuH)	SC (BtuH)	Input Power (watts)	TC (BtuH)	SC (BtuH)	Input Power (watts)	TC (BtuH)	SC (BtuH)	Input Power (watts)
Outdoor Ambient Temperature (DB)	-4°F (-18°C)	14,670	11,510	1,180	16,550	12,980	1,250	17,500	13,720	1,300	19,720	15,460	1,390
	5°F (-15°C)	15,050	11,800	1,180	16,970	13,320	1,260	18,160	14,240	1,300	20,220	15,860	1,390
	14°F (-10°C)	16,590	13,010	1,200	17,710	14,680	1,270	19,780	15,510	1,320	22,290	17,480	1,410
	23°F (-5°C)	18,170	14,260	1,200	20,700	16,240	1,270	22,270	17,470	1,310	24,500	19,220	1,400
	32°F (0°C)	19,103	14,986	1,196	21,764	14,466	1,265	22,379	17,543	1,309	25,759	20,204	1,404
	41°F (5°C)	20,083	15,754	1,257	22,880	15,208	1,330	23,527	18,442	1,376	27,080	21,240	1,476
	50°F (10°C)	20,919	16,411	1,310	23,833	15,841	1,386	24,507	19,211	1,433	28,209	22,125	1,538
	59°F (15°C)	22,040	17,290	1,380	25,110	16,690	1,460	25,820	20,240	1,510	29,720	23,310	1,620
	68°F (20°C)	24,961	19,577	2,028	26,521	20,797	2,092	28,341	22,228	2,219	32,501	25,494	2,375
	77°F (25°C)	24,666	19,349	2,082	26,235	20,578	2,146	28,081	22,026	2,283	32,241	25,283	2,448
	86°F (30°C)	23,453	18,392	2,329	25,013	19,621	2,402	27,301	21,412	2,548	31,245	24,502	2,731
	95°F (35°C)	22,196	17,409	2,503	23,748	18,620	2,576	26,001	20,394	2,740	29,927	23,475	2,932
104°F (40°C)	21,122	16,566	2,585	22,664	17,777	2,667	25,325	19,867	2,831	28,853	22,623	3,032	
113°F (45°C)	20,038	15,714	2,640	21,581	16,926	2,722	24,250	19,015	2,895	27,769	21,781	3,096	
118°F (48°C)	19,501	15,293	2,667	20,801	16,311	2,749	23,401	18,357	2,923	26,781	21,008	3,124	

HEATING PERFORMANCE													
DB WB		Indoor Ambient Temperature											
		70°F (21°C)			75°F (24°C)			80°F (27°C)			90°F (32°C)		
		59°F (15°C)			63°F (17°C)			67°F (19°C)			73°F (23°C)		
		TC (BtuH)	Input Power (watts)	COP	TC (BtuH)	Input Power (watts)	COP	TC (BtuH)	Input Power (watts)	COP	TC (BtuH)	Input Power (watts)	COP
Outdoor Ambient Temperature (DB)	-5°F (-21°C)	16,563	1,542	3.15	16,045	1,565	3.00	15,625	1,624	2.82	15,215	1,668	2.67
	0°F (-18°C)	16,974	1,577	3.15	16,485	1,609	3.00	16,177	1,669	2.84	15,751	1,708	2.70
	5°F (15°C)	17,442	1,613	3.17	16,939	1,645	3.02	16,622	1,706	2.85	16,187	1,746	2.72
	7°F (14°C)	17,909	1,648	3.19	17,393	1,682	3.03	17,067	1,744	2.87	16,622	1,784	2.73
	17°F (8°C)	19,224	1,719	3.28	18,662	1,754	3.12	18,308	1,819	2.95	17,828	1,861	2.81
	28°F (2°C)	21,716	1,832	3.47	21,145	1,869	3.32	20,538	1,938	3.11	20,293	1,983	3.00
	38°F (3°C)	27,000	2,108	3.75	26,429	2,151	3.60	25,831	2,230	3.39	25,577	2,282	3.29
	47°F (8°C)	30,517	2,192	4.08	29,592	2,237	3.88	29,003	2,320	3.66	28,206	2,374	3.48
	57°F (14°C)	31,523	2,235	4.13	30,571	2,281	3.93	29,964	2,365	3.71	29,130	2,420	3.53
	68°F (20°C)	32,810	2,310	4.16	31,810	2,360	3.95	31,180	2,450	3.73	30,310	2,500	3.55
	77°F (25°C)	33,570	2,370	4.15	32,550	2,420	3.94	31,900	2,510	3.72	31,020	2,570	3.54

LEGEND:	DB - Dry Bulb
	WB --- Wet Bulb
	TC --- Total Capacity (BtuH)
	SC --- Sensible Capacity (BtuH)
	Input Power---(Watts)
	COP---Coefficient Of Performance