


TOSOT

MULTI **ULTRA** Ductless heat-pump systems 24,000 BTU

Submittal Data: TM24H50		Heat Pump System	
Job Name		Location	
Purchaser		Date	
Submitted To		Engineer	
Unit Designation		For <input type="checkbox"/> Reference <input type="checkbox"/> Approval <input type="checkbox"/> Construction	
Schedule No.			
GENERAL FEATURES -Up to 3 Indoor Units (3-Port) -G10 DC Inverter Technology R410A -Automatic Defrosting -Compressor/Chassis Heaters -Copper Tubing w/ Acrylic-Resin Coated Aluminum Fins -Intelligent Defrost -Auto Restart on Power Outages -Multi-point Diagnostics -Limited 5 yr Parts & Compressor Warranty-Residential Only		 <p style="text-align: center;">TosotComfort.com</p>	
System Ratings		Outdoor Unit Data	
Rated Cooling Capacity	22,000 BTUH	Compressor Type	DC Inverter Driven Rotary
Cooling Capacity (min-max)	7,500-33,000 BTUH	RLA	17.0 A
Rated Heating Capacity	26,000 BTUH	Starting Current	5.0 A
Heating Capacity (min-max)	7,500-31,000 BTUH	Fan Motor Output Power	90 W
SEER/EER	23.0 / 12.5	FLA	0.4 A
HSPF/COP	10.5 / 3.7	Air Flow (Max)	2531 CFM
Operating Range		Sound Pressure Level	
Cooling - Low/High Ambient	(min-max) 0 - 118°F	Cooling	60 dB(A)
	-18 - 48°C	Heating	60 dB(A)
Heating - Low Ambient (ULTRA)	(min-max) -31 - 75°F	Dimensions & Weights	
	-35 - 24°C	Unit Dimensions Overall (WxDxH)*	39.5 x 16.8 x 31.1-in
Power Supply		* including Valve Covers and Grilles	
Normal Operational Voltage	208/230 V, 1 Phase, 60 Hz	Weight (Net/Shipping)	174/185-lbs
Voltage Range	187 - 253 V	Min. Number of Indoor Units 2	
Main Power Wire Size	10-2 AWG	Max. Number of Indoor Units 3	
Interconnecting Cable Wire Size	14-4 AWG	Refrigerant Piping Data	
MCA	23.0 A	Refrigerant Type	R410A
MOCP/Breaker Size	40 A	Refrigerant Charge	95.2 oz
		Additional Charge Per Line Length	0.2-oz/ft
		Connection Method-Flared	1/4x3/8-in
		Factory Charge for Total Line Length	98-ft
		Total Refrigerant Pipe Length	230-ft
		Max Refrigerant Piping Length to any Indoor Unit	82-ft
		Min Refrigerant Piping Length to any Indoor Unit	10-ft
		Max Elevation between Indoor Units	26-ft
		Max Lift from Outdoor to Indoor Unit	26-ft
		Max Drop from Outdoor to Indoor Unit	26-ft



SYSTEM FEATURES	
Compressor Type	Inverter Rotary
Core Technology Three Cylinder Two Stage Compressor	G10
Ultra Low Frequency Torque Control	YES
Power Factor Correction	YES
Refrigerant Type	R410A
Electronic Expansion Valve (EEV)	3
Basepan With Electric Heater	YES
Compressor Preheat	YES
Compressor With Electric Heater (-40°F)	YES
-40°F Wiring UL Approved	YES
Multi "Independent" Port Design	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
Ultra Heating (-31°F - 75°F)	YES
Ultra Cooling (0°F - 118°F)	YES
XK19 Wired Controller Interface	YES

REMOTE CONTROLLER FUNCTIONS¹	See individual Indoor Unit Controllers Functions
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¹ Not all Remote Controller functions are supported.

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

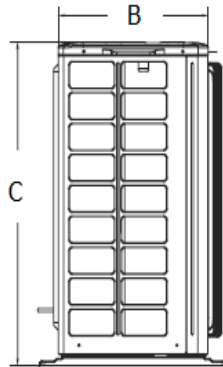
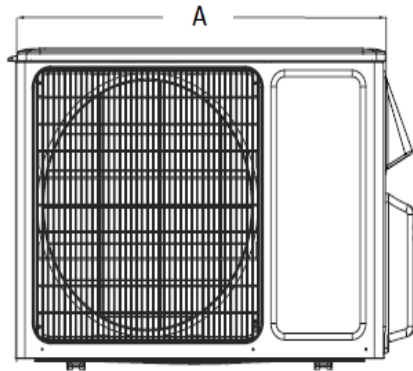
² Note: Some indoor models may not support specific system features or functions.

24,000 BTUH MODEL

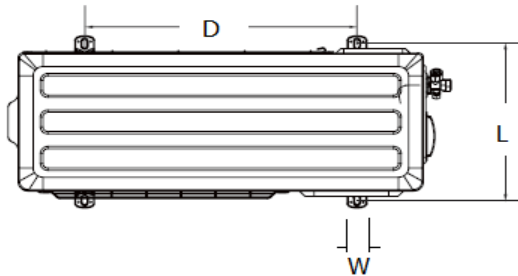
Model # TM24H50

24,000 BTUH 230V

Units: inch



A (in)	36.2
B (in)	14.6
C (in)	31.1



D (in)	24.0
L (in)	15.6
W (in)	2.4

Weight (Net/Shipping)	174/185 lbs
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Suction/Gas Line Port Size

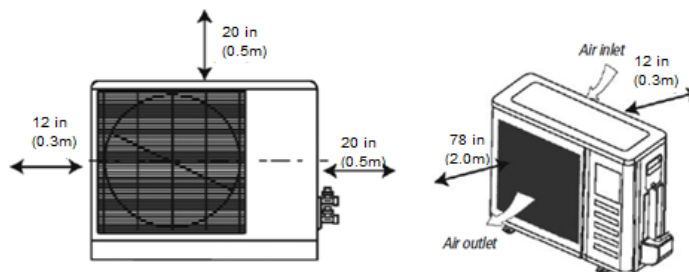
Port #1	3/8-in OD Flared
Port #2	3/8-in OD Flared
Port #3	3/8-in OD Flared

Liquid Line Port Size

Port #1	1/4-in OD Flared
Port #2	1/4-in OD Flared
Port #3	1/4-in OD Flared

MINIMUM SPACING REQUIREMENTS

Units: inch (mm)



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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EXTENDED RATINGS			TM24H50			ULTRA COOL			
COOLING PERFORMANCE (BtuH)* MODEL:TM24H50									
Outdoor Ambient Temperature (DB) °F	Indoor Entering Air Temperatures								
	68F DB			73°F DB			80°F DB		
	57F WB			61°FWB			67°FWB		
	TC	SHC		TC	SHC		TC	SHC	
0°F	17067	13385		18044	14137		19870	15590	
5°F	17664	13852		18674	14631		20564	16135	
14°F	18502	14511		19546	15324		22059	17302	
23°F	20271	15901		21682	17008		24843	19485	
32°F	21541	16894		22756	17847		25682	20137	
41°F	22315	17502		23566	18482		26931	21116	
50°F	22704	17806		24284	19045		27825	21817	
59°F	24582	19279		26293	20621		28797	22579	
68°F	27840	21835		29580	23196		31610	24792	
77°F	27511	21580		29261	22951		31320	24567	
86°F	26158	20513		27898	21884		30450	23882	
95°F	24756	19417		26487	20768		29000	22746	
104°F	23558	18477		25278	19828		28246	22158	
113°F	22949	17997		24679	19348		27647	21678	
122°F	22349	17527		24070	18878		27047	21208	
129°F	21750	17057		23200	18193		26100	20474	
ULTRA HEAT									
HEATING PERFORMANCE (BtuH)* MODEL:TM24H50									
Outdoor Ambient Temperature (DB)	Indoor Entering Air Temperatures								
	68°F DB			73°F DB			80°F DB		
	57°FWB			61°FWB			67°FWB		
	TC	Power Input (KW)	COP	TC	Power Input (KW)	COP	TC	Power Input (KW)	COP
-31°F	21800	4.68	1.37	21517	4.78	1.32	20972	4.89	1.26
-22°F	23850	4.73	1.48	23540	4.83	1.43	22944	4.94	1.36
-13°F	25900	4.78	1.59	25563	4.89	1.53	24916	5.00	1.46
-5°F	27722	4.82	1.68	27362	4.93	1.63	26669	5.04	1.55
0°F	28861	4.85	1.74	28486	4.96	1.68	27764	5.07	1.60
5°F	30000	4.88	1.80	29610	4.99	1.74	28860	5.10	1.66
10°F	28333	4.49	1.85	27965	4.59	1.79	27257	4.69	1.70
17°F	26000	3.95	1.93	25662	4.04	1.86	25012	4.13	1.78
19°F	26333	3.93	1.96	25991	4.02	1.89	25333	4.11	1.81
24°F	27167	3.89	2.05	26814	3.98	1.98	26134	4.07	1.88
32°F	28500	3.83	2.18	28130	3.91	2.11	27417	4.00	2.01
41°F	30000	3.75	2.34	29610	3.83	2.26	28860	3.92	2.16
43°F	30333	3.73	2.38	29939	3.82	2.30	29181	3.90	2.19
47°F	31000	3.70	2.46	30597	3.78	2.37	29822	3.87	2.26
53°F	31340	3.27	2.81	33394	3.31	2.96	32695	3.41	2.81
59°F	31614	3.30	2.81	30734	3.34	2.70	30085	3.45	2.56
64°F	32283	3.03	3.12	31394	3.06	3.00	30734	3.16	2.85
70°F	32895	3.08	3.13	31987	3.11	3.01	31308	3.21	2.86
75°F	33354	2.81	3.48	32436	2.84	3.34	31757	2.93	3.17
78°F	33660	2.84	3.48	32732	2.87	3.34	32044	2.96	3.17
* Maximum system capacity TC- Total Capacity (BtuH) COP- Coefficient of Performance									

ULTRA HEAT

ULTRA COOL

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

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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