

## Ultra Heat Multi Zone Heat Pump

# TOSOT

**MODEL: TM24H5O**

Project Name:

Location:

Engineer Name:

Purshaser:

Unit Designation:

Schedule No.

SubmittedTo:

Date:

### General Features

- High And Low Pressure Protection Features
- Over Load Protection Features
- 100% Heating Capacity at -4F
- 80% Heating Capacity at -22F
- Stable Operation at -31F!
- Drain Pan Heater Included



- Over-Current Protection
- Anti Freeze Protection
- Optional BMS Integration

### Unit Performance:

Cooling:	-	-
Capacity (Min Rated Max, Btu/h)	7,500-22,000-33,000	
SEER	23	
EER (Btu/h)/w	12.5	
Heating:	-	-
Capacity (Min Rated Max, Btu/h)	7,650-26,000-31,000	
HSPF	10.5	
COP (W/W)	3.66	

### Unit Specification

Refrigerant Type	R410A
Refrigerant Control	EEV
Sound Pressure (dB(A))	60
Net Weight (lbs)	174
Min. Number IDU	1
Max. Number IDU	3
Dehumidification (Pint/h)	N/A
Heat Exchanger Coating	GoldFin™

### Piping

Refrigerant Charge (lbs)	6
Liquid Line (in)	1/4
Gas Line (in)	3/8
Max Total Piping (ft)	229.6
Max ODU to IDU Piping (per zone, ft)	82
Total Piping Length (with factory charge, ft)	98.4
Max Elevation between ODU and IDU (ft)	26
Max Elevation between IDU and IDU (ft)	26

### Electrical Specification

Power Supply	208-230V / 60Hz
Communications Wire Size	AWG 14/4
MOP (A)	40
MCA (A)	23
Cooling Rated Amps (A)	7.65
Heating Rated Amps (A)	9.1
Compressor RLA (A)	17
Fan Motor RLA (A)	0.38
Nominal Cooling Power Input (kW)	1.76
Nominal Heating Power Input (kW)	2.09

### Operating Range:

Cooling (°F)	0~118
Heating (°F)	-31~75

### Compressor:

Quantity	1
Type	Inverter Rotary
Oil/Type	FW68DA

### Fan

Type	Axial-flow
Quantity	1
Motor/Drive	DC motor/Direct drive
Max Air Flow Rate (CFM)	2530

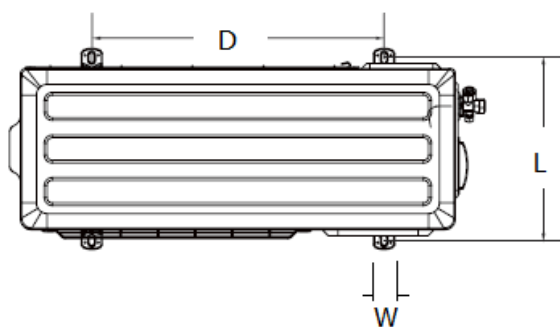
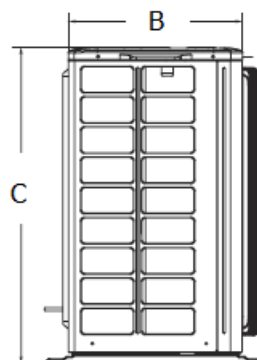
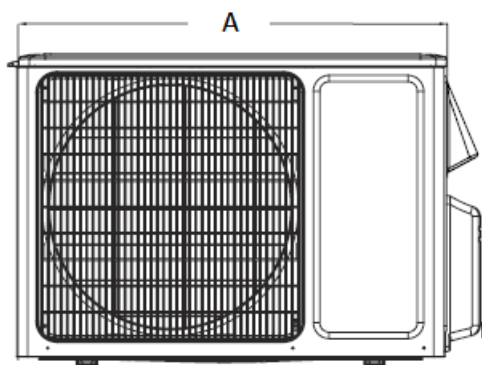


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Outline Dimension Diagram



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

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

**GLOSSARY**

SEER - Seasonal Energy Efficiency Ratio

EER - Energy Efficiency Ratio

HSPF - Heating Seasonal Performance Factor

MOP - Maximum Overcurrent Protection

MCA - Minimum Circuit Ampacity

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MODEL: TM24H50

## System Performance

### COOLING PERFORMANCE (BtuH)\*

Outdoor Ambient Temperature (DB) °F	Indoor Entering Air Temperatures					
	68F DB		73°F DB		80°F DB	
	57F WB		61°F WB		67°F WB	
	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

### HEATING PERFORMANCE (BtuH)\*

Outdoor Ambient Temperature (DB)	Indoor Entering Air Temperatures								
	68°F DB			73°F DB			80°F DB		
	57°F WB			61°F WB			67°F WB		
	TC	Power Input (KW)	COP	TC	Power Input (KW)	COP	TC	Power Input (KW)	COP
-31°F	21500	5.45	1.16	21000	5.50	1.12	20500	5.70	1.05
-22°F	24954	5.50	1.33	24292	5.57	1.28	23801	5.74	1.21
-13°F	27324	5.58	1.44	26614	5.64	1.38	26089	5.82	1.31
-5°F	31846	5.42	1.72	31034	5.48	1.66	30433	5.66	1.58
0°F	31376	5.51	1.67	30550	5.58	1.61	29933	5.75	1.52
5°F	31523	5.24	1.76	30703	5.30	1.70	30097	5.46	1.61
10°F	31872	5.29	1.77	31044	5.35	1.70	30423	5.52	1.62
17°F	31268	5.25	1.75	30448	5.31	1.68	29825	5.48	1.60
19°F	30852	4.91	1.84	30427	4.96	1.80	29802	5.12	1.71
24°F	29903	5.08	1.72	29546	5.14	1.68	29011	5.30	1.60
32°F	29135	4.86	1.76	28814	4.92	1.72	28344	5.07	1.64
41°F	30281	4.50	1.97	29984	4.55	1.93	29535	4.69	1.84
43°F	31110	3.52	2.59	30813	3.56	2.54	30373	3.67	2.42
47°F	34000	3.60	2.77	33065	3.64	2.66	32366	3.76	2.52
53°F	34340	3.27	3.08	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

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