


TOSOT

MULTI **ULTRA** Ductless heat-pump systems 42,000 BTU

Submittal Data: TM42H50		Heat Pump System	
Job Name		Location	
Purchaser		Date	
Submitted To		Engineer	
Submitted To		For <input type="checkbox"/> Reference <input type="checkbox"/> Approval <input type="checkbox"/> Construction	
Unit Designation		Schedule No.	
GENERAL FEATURES -Up to Five Indoor Units (5-Port) -G10 DC Inverter Technology - 2 Stage / 3 Cylinder -Quiet Operation - Both Indoor & Outdoor -Blue Fin Coil Coating -Intelligent Defrost -Auto Restart on Power Outages -Multit-point Diagnostics -Limited 5 yr Parts & Compressor Warranty-Residential Only			
System Ratings		Outdoor Unit Data	
Rated Cooling Capacity	42,000 BTUH	Compressor Type	DC Inverter Driven Rotary
Cooling Capacity (min-max)	8,871-42,991 BTUH	RLA	28.5 A
Rated Heating Capacity	42,000 BTUH	Starting Current	5.0 A
Heating Capacity (min-max)	8,871-46,062 BTUH	Fan Motor Output Power	90 W
SEER/EER	23.0 / 9.0	FLA	1.0 A
HSPF/COP	10.0 / 3.42	Air Flow (Max)	3,060 CFM
Operating Range		Sound Pressure Level	
Cooling (min-max)	0 - 115°F	Cooling	62 dB(A)
	-18 - 46°C	Heating	62 dB(A)
Heating (min-max)	-31 - 75°F	Dimensions & Weights	
	-35 - 24°C	Unit Dimensions Overall (WxDxH)*	42.8 x 17.3 x 43.4-in
Power Supply		* including Valve Covers and Grilles	
Normal Operational Voltage	208/230 V, 1 Phase, 60 Hz	Weight (Net/Shipping)	282/300-lbs
Voltage Range	187 - 253 V	Min. Number of Indoor Units	2
Main Power Wire Size	8-2 AWG	Max. Number of Indoor Units	5
Interconnecting Cable Wire Size	14-4 AWG	Refrigerant Piping Data	
MCA	38.0 A	Refrigerant Type	R410A
MOCP/Breaker Size	40 A	Refrigerant Charge	176.4-oz
		Additional Charge Per Line Length	0.2-oz/ft
		Connection Method-Flared	1/4 x 3/8-in
		Factory Charge for Total Line Length	131-ft
		Total Refrigerant Pipe Length	246-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	49-ft
		Max Lift from Outdoor to Indoor Unit	49-ft
		Max Drop from Outdoor to Indoor Unit	49-ft



ULTRA HEAT

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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)	4
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 (-22°F - 75°F)	YES
Ultra Cooling (0°F - 115°F)	YES
XK19 Wired Controller Interface	YES

REMOTE CONTROLLER FUNCTIONS¹

See individual Indoor Unit
Controllers Functions

¹ Not all Remote Controller functions are supported.

XK19 WIRED CONTROLLER FUNCTIONS²

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.

OUTDOOR UNIT DIMENSIONAL SPECIFICATIONS

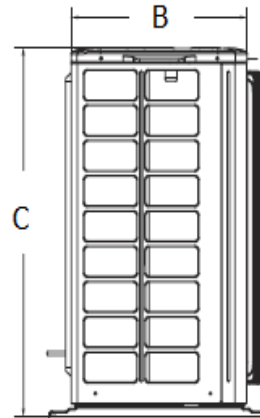
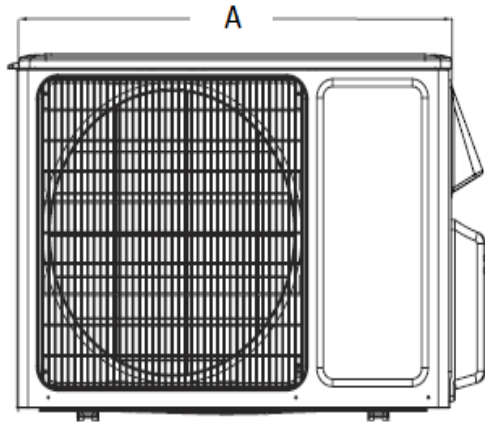
TM42H50

ULTRA HEAT **ULTRA COOL**

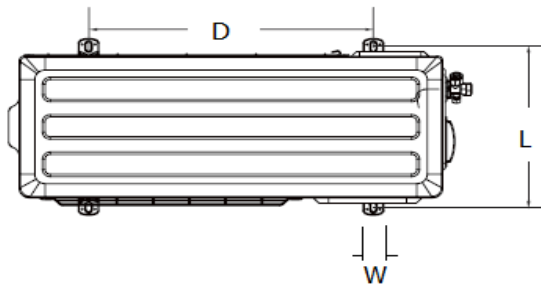
42,000 BTUH MODEL

Model #TM42H50 42,000 BTUH 230V

Units: inch



A (in)	40
B (in)	17.3
C (in)	43.5



D (in)	24.8
L (in)	16.2
W (in)	3.1

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

Weight (Net/Shipping) 282/300 lbs

Factory Supplied Piping Adapters

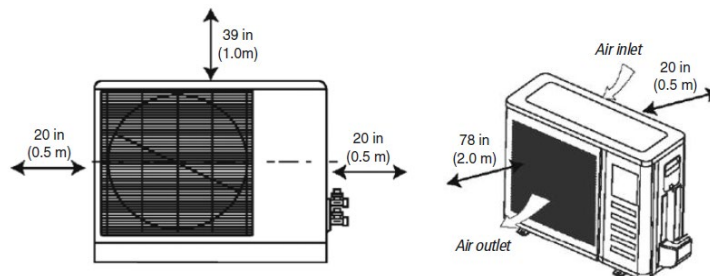
Adapter	P/N	Qty
3/8 (F) to 5/8 (M)	6654100009	3
3/8 (F) to 1/2 (M)	6654100013	4
1/4 (F) to 3/8 (M)	6654104	2

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

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.

Specifications are subject to change without notice. Manufacturer reserves the right to discontinue or modify specifications or designs without notice or without incurring obligations. All rights reserved.

EXTENDED RATINGS				TM42H50					
ULTRA COOL				ULTRA COOL					
COOLING PERFORMANCE (BtuH)* MODEL:TM42H50									
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	24000	19500		26000	20500		28900	22300	
5°F	25582	20062		27045	21189		29782	23368	
14°F	26796	21016		28308	22193		31948	25057	
23°F	29358	23030		31402	24632		35980	28220	
32°F	30051	53625		32274	57590		37327	66603	
41°F	27549	76709		29773	82901		34704	96626	
50°F	25141	95143		27343	103477		32122	121561	
59°F	35602	27922		38080	29865		41706	32701	
68°F	40320	31623		42840	33594		45780	35906	
77°F	39844	31254		42378	33240		45360	35580	
86°F	37884	29709		40404	31694		44100	34587	
95°F	35854	28121		38360	30078		42000	32942	
104°F	34118	26759		36610	28716		40908	32091	
113°F	32368	25384		34860	27341		39172	30716	
122°F									
129°F									
				ULTRA HEAT					
HEATING PERFORMANCE (BtuH)* MODEL:TM42H50									
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	27000	5.50	1.44	27500	6.52	1.24	26000	5.85	1.30
-22°F	28744	5.57	1.51	29134	5.73	1.49	27998	5.91	1.39
-13°F	32450	5.65	1.68	31904	5.81	1.61	30689	5.99	1.50
-5°F	37824	5.64	1.97	37188	5.79	1.88	35799	5.98	1.76
0°F	30672	5.00	1.80	30273	5.10	1.74	29507	5.18	1.67
5°F	31200	5.02	1.82	30794	5.13	1.76	30014	5.24	1.68
10°F	34313	5.48	1.84	33866	5.60	1.77	33009	5.72	1.69
17°F	42723	5.72	2.19	42011	5.88	2.10	40352	6.06	1.95
19°F	42686	5.50	2.28	41988	5.65	2.18	40320	5.83	2.03
24°F	41296	5.42	2.23	40671	5.58	2.14	39250	5.75	2.00
32°F	40132	5.19	2.27	39589	5.33	2.18	38348	5.50	2.04
41°F	41630	5.11	2.39	41141	5.26	2.29	39959	5.42	2.16
43°F	42751	5.10	2.46	42248	5.24	2.36	41093	5.41	2.23
47°F	46460	5.22	2.61	45655	5.36	2.50	43789	5.53	2.32
53°F	46920	4.74	2.90	46101	4.87	2.77	44234	5.03	2.58
59°F	43198	4.78	2.65	42435	4.92	2.53	40703	5.07	2.35
64°F	44117	4.39	2.95	43341	4.51	2.82	41582	4.65	2.62
70°F	44945	4.46	2.96	44169	4.58	2.83	42358	4.73	2.63
75°F	45579	4.07	3.28	44777	4.19	3.14	42965	4.32	2.92
78°F	45993	4.11	3.28	45191	4.22	3.14	43353	4.36	2.92
* Maximum system capacity TC- Total Capacity (BtuH) COP- Coefficient of Performance					* Maximum system capacity TC- Total Capacity (BtuH) COP- Coefficient of Performance				

ULTRA COOL

COOLING CAPACITY (BTUH)

Indoor Units Combinations	Rated System (BtuH)	Indoor Unit A (BtuH)	Indoor Unit B (BtuH)	Indoor Unit C (BtuH)	Indoor Unit D (BtuH)	Indoor Unit E (BtuH)
9+9	19,500	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	32,700	10,000	22,700	NA	NA	NA
18+18	31,680	15,840	15,840	NA	NA	NA
18+24	33,190	14,240	18,950	NA	NA	NA
24+24	35,120	17,560	17,560	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	30,200	7,200	7,200	15,800	NA	NA
9+9+24	34,900	6,600	6,600	21,700	NA	NA
9+12+12	29,600	8,000	10,800	10,800	NA	NA
9+12+18	32,900	7,400	9,800	15,700	NA	NA
9+12+24	36,100	6,800	9,100	20,200	NA	NA
9+18+18	36,100	6,500	14,800	14,800	NA	NA
12+12+12	31,200	10,400	10,400	10,400	NA	NA
12+12+18	35,100	9,960	9,960	15,180	NA	NA
12+12+24	37,500	9,300	9,300	18,900	NA	NA
12+18+18	37,500	8,900	14,300	14,300	NA	NA
9+9+9+9	35,480	8,870	8,870	8,870	8,870	NA
9+9+9+12	36,490	8,460	8,460	8,460	11,110	NA
9+9+9+18	38,350	7,650	7,650	7,650	15,400	NA
9+9+12+12	39,000	8,300	8,300	11,200	11,200	NA
9+9+12+18	39,840	7,470	7,470	9,960	14,940	NA
9+12+12+12	39,280	7,000	10,760	10,760	10,760	NA
9+12+12+18	40,010	6,760	9,600	9,600	14,050	NA
12+12+12+12	39,800	9,950	9,950	9,950	9,950	NA
9+9+9+9+9	39,600	7,920	7,920	7,920	7,920	7,920
9+9+9+9+12	39,700	7,430	7,430	7,430	7,430	9,980

Note:

1) It is critical to size the outdoor unit for the entire building load and each indoor unit for its individual zone load.

Cooling Nominal Test Conditions: Indoor: 80°F DB/67°F WB Outdoor: 95°F DB/75°F WB

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HEATING CAPACITY (BTUH)

Indoor Units Combinations	Rated System (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	34,800	11,200	23,600	NA	NA	NA
18+18	34,700	17,400	17,300	NA	NA	NA
18+24	37,800	16,200	21,600	NA	NA	NA
24+24	38,400	19,200	19,200	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	39,600	7,900	7,900	23,800	NA	NA
9+12+12	33,000	9,000	12,000	12,000	NA	NA
9+12+18	36,150	8,650	11,200	16,300	NA	NA
9+12+24	40,940	7,900	10,240	22,800	NA	NA
9+18+18	41,020	7,560	16,730	16,730	NA	NA
12+12+12	36,000	12,000	12,000	12,000	NA	NA
12+12+18	40,100	11,400	11,400	17,300	NA	NA
12+12+24	42,500	10,620	10,620	21,260	NA	NA
12+18+18	42,500	10,130	16,185	16,185	NA	NA
9+9+9+9	44,000	11,000	11,000	11,000	11,000	NA
9+9+9+12	30,780	10,260	10,260	10,260	13,420	NA
9+9+9+18	26,760	8,920	8,920	8,920	18,200	NA
9+9+12+12	32,130	9,630	9,630	12,870	12,870	NA
9+9+12+18	28,500	8,550	8,550	11,400	17,100	NA
9+12+12+12	32,900	8,120	12,390	12,390	12,390	NA
9+12+12+18	29,370	8,010	10,680	10,680	16,200	NA
12+12+12+12	45,880	11,470	11,470	11,470	11,470	NA
9+9+9+9+9	45,500	9,100	9,100	9,100	9,100	9,100
9+9+9+9+12	45,640	8,540	8,540	8,540	8,540	11,480

Note:

1) It is critical to size the outdoor unit for the entire building load and each indoor unit for its individual zone load

Cooling Nominal Test Conditions: Indoor: 80°F DB/67°F WB Outdoor: 95°F DB/75°F WB

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