UNITARY SIDE DISCHARGE SPLIT SYSTEM 24VAC CONTROL

36,000 BTU / H UNITARY HEAT PUMP SPLIT SYSTEM

SUBMITTAL DATA: TUD36-24AH2ADU / TU36-24WADU

Job Name	Location		Date	
Purchaser	Engineer			
Submitted To	For	☐ Reference	☐ Approval	☐ Construction
Unit Designation	Schedule No.			

SYSTEM TYPE:
HEAT PUMP



TU36-24WADU



TUD36-24AH2ADU

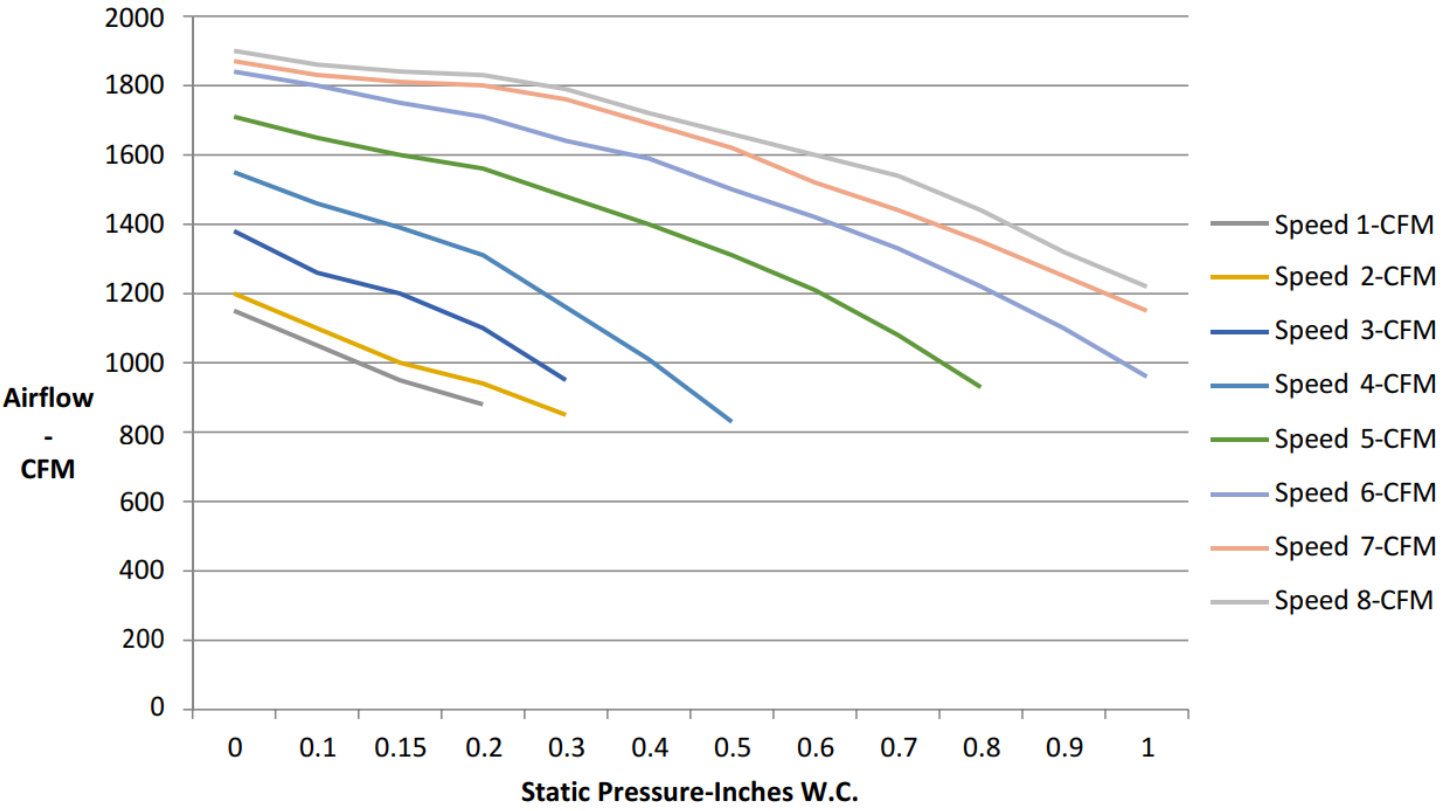
GENERAL FEATURES

- High Efficiency DC Inverter Technology
- Compact and Quiet 52 dB(A) Side Discharge Outdoor Unit
- Zero Lot Line Design
- Match with TOSOT or Competitive Indoor Unit
- Designed for New Construction or Replacement Market
- 24VAC Thermostat Compatible
- 8 Speed Fan Motor
- Low Ambient Cooling down to 5°F(-15°C)
- Low Ambient Heating down to -22°F(-30°C)
- Outdoor Coil has Copper Tube/Aluminum Fin with Acetal-Resin Coating (Golden Fin – 1,500Hr Salt Spray Rating)
- Indoor Coil has Copper Tube/Aluminum Fin with Acetal-Resin Coating (Blue Fin - 500Hr Salt Spray Rating)

SYSTEM PERFORMANCE			
Cooling	Rated Capacity @ 95°F	Btu/h	36,000
	Min-Max Capacity	Btu/h	18,000 – 37,000
Heating	Rated Capacity @ 47°F	Btu/h	36,000
	Rated Capacity @ 17°F	Btu/h	24,000
	Min-Max Capacity	Btu/h	18,000 – 38,000
SEER / EER			18 / 11
HSPF / COP			10 / 3.5
SEER2 / EER2			16 / 10
HSPF2			9
AHRI Number			206414273
Cooling Temperature Range		°F/°C	5 ~ 129 / -15 ~ 54
Heating Temperature Range		°F/°C	-22 ~ 75 / -30 ~ 24
INDOOR UNIT			**TUD36-24AH2ADU**
Fan Motor Output Power		W	373
Fan Motor FLA		A	3
Air Flow (Min - Max)		CFM	1,000
Static Pressure (Rated / Maximum)		In w.c	0.15 / 1.0
Sound Pressure Level (Cooling / Heating)		dB(A)	47
Dehumidification		pt/hr	9.68
Condensate Drain Size (OD)		in	3 / 4
Unit Dimension (WxHxD)		in	21 1/4 x 48 1/4 x 21 1/4
Package Dimension (WxHxD)		in	26 x 50 7/16 x 23 3/4
Weight (Net / Gross)		lbs	156 / 169
Electric Heater (Optional)		kW	5, 8, 10, 15
OUTDOOR UNIT			**TU36-24WADU**
Compressor Type			Inverter Rotary
Compressor RLA		A	16
Fan Motor Output Power (2)		W	149
Fan Motor (2)		A	1.5
Sound Pressure Level (Cooling / Heating)		dB(A)	52 (45 - 56)
Unit Dimension (WxHxD)		in	32 1/4 x 37 x 18 1/8
Package Dimension (WxHxD)		in	38 3/8 × 42 11/16 × 22 9/16
Weight (Net / Gross)		lbs	217 / 240
Refrigerant Charge - R410A		oz	148
Coil Type (Blue Fin)			Copper Tube / Aluminum Fin
REFRIGERANT PIPING			
Line Set Size (Liquid - Gas)		in	3/8 - 3/4
Pre-Charge Lengh		ft	31
Additional Charge		oz/ft	0.32
Pipe Length (Min - Max)		ft	10 – 98
Max. Pipe Elevation		ft	49
ELECTRICAL			
Power Supply			208/230V / 1Ph / 60 Hz
Outdoor Unit	Rated Current (Cooling / Heating)	A	21 / 25
	MCA / MOCP	A	24 / 35
Indoor Unit	Rated Current (Cooling / Heating)	A	3 / 3
	MCA / MOCP	A	4 / 15
Main Power Wire Size		AWG	Size Per Local Code
LIMITED WARRANTY	10 Year Parts, 10 Years Compressor - Residential & Commercial		

TOSOT

FAN PERFORMANCE: TUD36-24AH2ADU



Static Pressure Inches W.C.	0	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
Speed 1-CFM	1150	1050	950	880								
Speed 2-CFM	1200	1100	1000	940	850							
Speed 3-CFM	1380	1260	1200	1100	950							
Speed 4-CFM	1550	1460	1390	1310	1160	1100	830					
Speed 5-CFM	1710	1650	1600	1560	1480	1400	1310	1210	1080	930		
Speed 6-CFM	1840	1800	1750	1710	1640	1590	1500	1420	1330	1220	1100	960
Speed 7-CFM	1870	1830	1810	1800	1760	1690	1620	1520	1440	1350	1250	1150
Speed 8-CFM	1900	1860	1840	1830	1790	1720	1660	1600	1540	1440	1320	1220

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EXTENDED RATINGS: TUD36-24AH2ADU / TU36-24WADU

COOLING PERFORMANCE

Outdoor Ambient Temperature (DB)		Return Air Temperature																			
		70°F (DB) / 59°F (WB)					75°F (DB) / 63°F (WB)					80°F (DB) / 67°F (WB)					90°F (DB) / 73°F (WB)				
		TC (Btu/h)	SC (Btu/h	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h	SHR	EER (Btu/ (h·W))	Power Input (W)	TC (Btu/h)	SC (Btu/h	SHR	EER (Btu/ (h·W))	Power Input (W)	TC (Btu/h)	SC (Btu/h	SHR	EER (Btu/ (h·W))	Power Input (W)
MAX OUTPUT*	5°F	30600	21420	70.00%	14.57	2100	33300	23310	70.00%	15.49	2150.1	36000	25200	70.00%	16.36	2200	38000	27200	71.58%	16.52	2300
	10°F	30600	21420	70.00%	14.37	2130	33300	23310	70.00%	15.28	2180	36000	25200	70.00%	16.14	2230	38000	27200	71.58%	16.31	2330
	15°F	30600	21420	70.00%	14.10	2170	33300	23310	70.00%	15.03	2215	36000	25200	70.00%	15.93	2260	38000	27200	71.58%	16.10	2360
	20°F	30600	21420	70.00%	13.91	2200	33300	23310	70.00%	14.80	2250	36000	25200	70.00%	15.65	2300	38000	27200	71.58%	15.83	2400
	25°F	30600	21420	70.00%	13.72	2230	33300	23310	70.00%	14.61	2280	36000	25200	70.00%	15.45	2330	38000	27200	71.58%	15.64	2430
	30°F	30600	21420	70.00%	13.48	2270	33300	23310	70.00%	14.35	2320	36000	25200	70.00%	15.19	2370	38000	27200	71.58%	15.38	2470
	35°F	30600	21420	70.00%	13.30	2300	33300	23310	70.00%	14.17	2350	36000	25200	70.00%	15.00	2400	38000	27200	71.58%	15.20	2500
	40°F	30600	21420	70.00%	13.13	2330	33300	23310	70.00%	13.99	2380	36000	25200	70.00%	14.81	2430	38000	27200	71.58%	15.02	2530
	45°F	30600	21420	70.00%	12.91	2370	33300	23310	70.00%	13.76	2420	36000	25200	70.00%	14.57	2470	38000	27200	71.58%	14.79	2570
	50°F	30600	21420	70.00%	12.75	2400	33300	23310	70.00%	13.59	2450	36000	25200	70.00%	14.40	2500	38000	27200	71.58%	14.62	2600
	55°F	30600	21420	70.00%	12.59	2430	33300	23310	70.00%	13.43	2480	36000	25200	70.00%	14.23	2530	38000	27200	71.58%	14.45	2630
	60°F	30600	21420	70.00%	12.39	2470	33300	23310	70.00%	13.21	2520	36000	25200	70.00%	14.06	2560	38000	27200	71.58%	14.29	2660
	65°F	30600	21420	70.00%	12.24	2500	33300	23310	70.00%	13.06	2550	36000	25200	70.00%	13.85	2600	38000	27200	71.58%	14.07	2700
	70°F	30600	21390	69.90%	12.00	2550	33300	23270	69.88%	12.81	2600	36000	25160	69.89%	13.58	2650	38000	27160	71.47%	13.82	2750
	75°F	30600	21360	69.80%	11.77	2600	33300	23240	69.79%	12.57	2650	36000	25130	69.81%	13.33	2700	38000	27130	71.39%	13.57	2800
	80°F	30600	21310	69.64%	11.33	2700	33300	23360	70.15%	11.89	2800	36000	25420	70.61%	12.41	2900	38000	27420	72.16%	12.67	3000
	85°F	30600	21260	69.48%	10.93	2800	33800	23480	69.47%	11.46	2950	37000	25710	69.49%	11.94	3100	39000	27710	71.05%	12.19	3200
	90°F	30600	21340	69.74%	10.37	2950	33800	23570	69.73%	10.73	3150	37000	25800	69.73%	11.04	3350	39000	27800	71.28%	11.30	3450
	95°F	30600	21420	70.00%	9.87	3100	33800	23660	70.00%	10.09	3350	37000	25900	70.00%	10.28	3600	39000	27900	71.54%	10.77	3620
	100°F	30600	21260	69.48%	8.20	3730	33300	23310	70.00%	8.63	3860	36000	25370	70.47%	9.00	4000	38000	27370	72.03%	9.45	4020
	105°F	30600	21110	68.99%	7.00	4370	33300	22970	68.98%	7.60	4380	36000	24840	69.00%	8.18	4400	38000	26840	70.63%	8.60	4420
	110°F	29320	20510	69.95%	6.95	4220	31910	22320	69.95%	7.54	4230	34500	24130	69.94%	8.12	4250	36500	26130	71.59%	8.55	4270
	115°F	28050	19920	71.02%	6.88	4080	30525	21670	70.99%	7.46	4090	33000	23430	71.00%	8.05	4100	35000	25430	72.66%	8.50	4120
	120°F	27500	19620	71.35%	6.91	3980	29900	21260	71.10%	7.44	4020	32300	22900	70.90%	7.98	4050	34300	24900	72.59%	8.43	4070
	122°F	27000	19490	72.19%	6.96	3880	29250	21020	71.86%	7.46	3920	31500	22550	71.59%	7.97	3950	33500	24550	73.28%	8.44	3970
	125°F	26500	19320	72.91%	6.97	3800	28500	20560	72.14%	7.42	3840	30500	21800	71.48%	7.92	3850	32500	23800	73.23%	8.40	3870
	129°F	26000	19000	73.08%	6.93	3750	27750	20250	72.97%	7.40	3750	29500	21500	72.88%	7.87	3750	31500	23500	74.60%	8.36	3770

*Maximum Output values are not based on AHRI test conditions

LEGEND:	W - Watts
	DB - Dry Bulb
	TC - Total Capacity
	SC - Sensible Capacity
	SHR - Sensible Heat Ratio
	COP - Coeffecient of Performance

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EXTENDED RATINGS: TUD36-24AH2ADU / TU36-24WADU

HEATING PERFORMANCE

	Outdoor Ambient Temperature (DB)	Return Air Temperature											
		70°F (DB) / 59°F (WB)			75°F (DB) / 63°F (WB)			80°F (DB) / 67°F (WB)			90°F (DB) / 73°F (WB)		
		TC (Btu/h)	COP (W/W)	Power Input (W)	TC (Btu/h)	COP (W/W)	Power Input (W)	TC (Btu/h)	COP (W/W)	Power Input (W)	TC (Btu/h)	COP (W/W)	Power Input (W)
MAX OUTPUT*	-22°F	18400	1.30	4150	18200	1.28	4170	18000	1.26	4190	20000	1.34	4390
	-20°F	19800	1.35	4290	19550	1.33	4310	19300	1.31	4330	21300	1.38	4530
	-15°F	21100	1.40	4430	20850	1.37	4450	20600	1.35	4470	22600	1.42	4670
	-10°F	23200	1.50	4530	22950	1.48	4550	22700	1.46	4570	24700	1.52	4770
	-5°F	25200	1.60	4630	25000	1.58	4650	24800	1.56	4670	26800	1.61	4870
	0°F	27600	1.71	4720	26500	1.70	4580	25400	1.68	4440	27400	1.73	4640
	5°F	30000	1.83	4800	28000	1.82	4500	26000	1.81	4200	28000	1.87	4400
	10°F	32500	1.88	5070	30250	1.87	4735	28000	1.87	4400	30000	1.91	4600
	15°F	34000	1.92	5180	32000	1.92	4890	30000	1.91	4600	32000	1.95	4800
	17°F	36000	1.94	5450	33500	1.92	5125	31000	1.89	4800	33000	1.93	5000
	20°F	36000	1.98	5320	34000	1.97	5070	32000	1.95	4820	34000	1.99	5020
	25°F	36000	2.06	5110	34250	2.02	4965	32500	1.98	4820	34500	2.01	5020
	30°F	36000	2.15	4900	34500	2.07	4875	33000	1.99	4850	35000	2.03	5050
	35°F	36400	2.30	4640	34700	2.23	4570	33000	2.15	4500	35000	2.18	4700
	40°F	36933	2.58	4200	34967	2.52	4060	33000	2.47	3920	35000	2.49	4120
	45°F	37289	2.90	3770	35144	2.90	3550	33000	2.90	3330	35000	2.91	3530
	47°F	38000	3.09	3600	35500	3.11	3350	33000	3.12	3100	35000	3.11	3300
	50°F	38000	3.18	3500	35500	3.20	3250	33000	3.22	3000	35000	3.21	3200
	55°F	38000	3.35	3320	35500	3.37	3085	33000	3.39	2850	35000	3.36	3050
	60°F	38000	3.54	3150	34000	3.41	2925	30000	3.26	2700	32000	3.23	2900
	65°F	38000	3.71	3000	34000	3.56	2800	30000	3.38	2600	32000	3.35	2800
	70°F	38000	3.91	2850	34000	3.76	2650	30000	3.59	2450	32000	3.54	2650
	75°F	38000	3.99	2790	34000	3.85	2590	30000	3.68	2390	32000	3.62	2590
	80°F												
	86°F												

*Maximum Output values are not based on AHRI test conditions

LEGEND:	W - Watts
	DB - Dry Bulb
	TC - Total Capacity
	SC - Sensible Capacity
	SHR - Sensible Heat Ratio
	COP - Coeffecient of Performance

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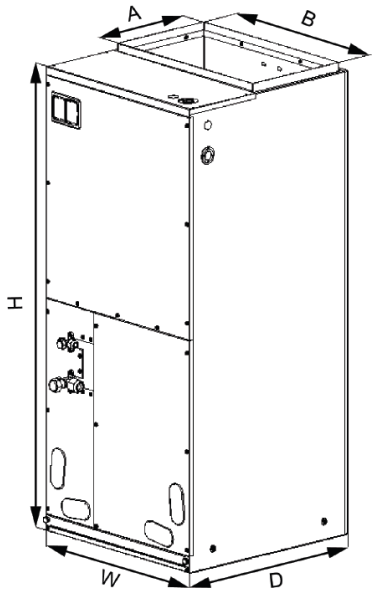
TOSOT

FEATURES SUMMARY: TUD36-24AH2ADU / TU36-24WADU

SYSTEM FEATURES	
Compressor	Inverter
Ultra Low Frequency Torque Control	YES
Power Factor Correction	YES
Compressor Type	Rotary
Refrigerant Type	R410A
Outdooor Electronic Expansion Valve (EEV)	YES
Indoor TXV Control	YES
Basepan With Electric Heater	YES
Compressor With Electric Heater	YES
Fin Coating (Outdoor & Indoor)	Acrylic Resin
Intelligent Defrosting	YES
Intelligent Preheating	YES
Low Voltage Startup	YES
Memory/Power Failure Recovery	YES
Self Diagnosis	YES
Low Ambient Cooling	YES
24VAC Thermostat Compatible	YES
Indoor Fan Type	Centrifugal
Multi Fan Speeds	8 Speeds
Auxiliary Electrical Heater	Optional

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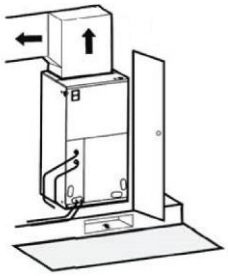
DIMENSIONS & CLEARANCES: TUD36-24AH2ADU

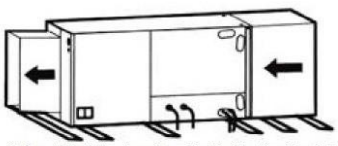


Dimensions	
A	11 5/8
B	20
H	48 1/4
W	21 1/4
D	21 1/4

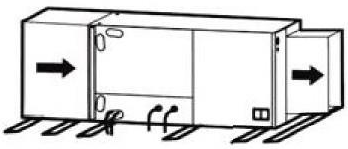
Filter Size	
Supplied*	19 1/4 x 20 1/4 x 1/2
Suggested	19 1/4 x 20 1/4 x 1
*Supplied filter is metal mesh	

Clearances	
Front	> 24 inch
	Allow a minimum of 24” in front of the unit for service clearance. When installing in an area directly over a finished ceiling (such as an attic), an emergency drain pan is required directly under the unit. See local and state codes for requirements. When installing this unit in an area that may become wet, elevate the unit with a sturdy, non-porous material. In installations that may lead to physical damage (i.e. a garage) it is advised to install a protective barrier to prevent such damage.This air handler is designed for a complete supply and return ductwork system.
Multi-Position Capabilities	





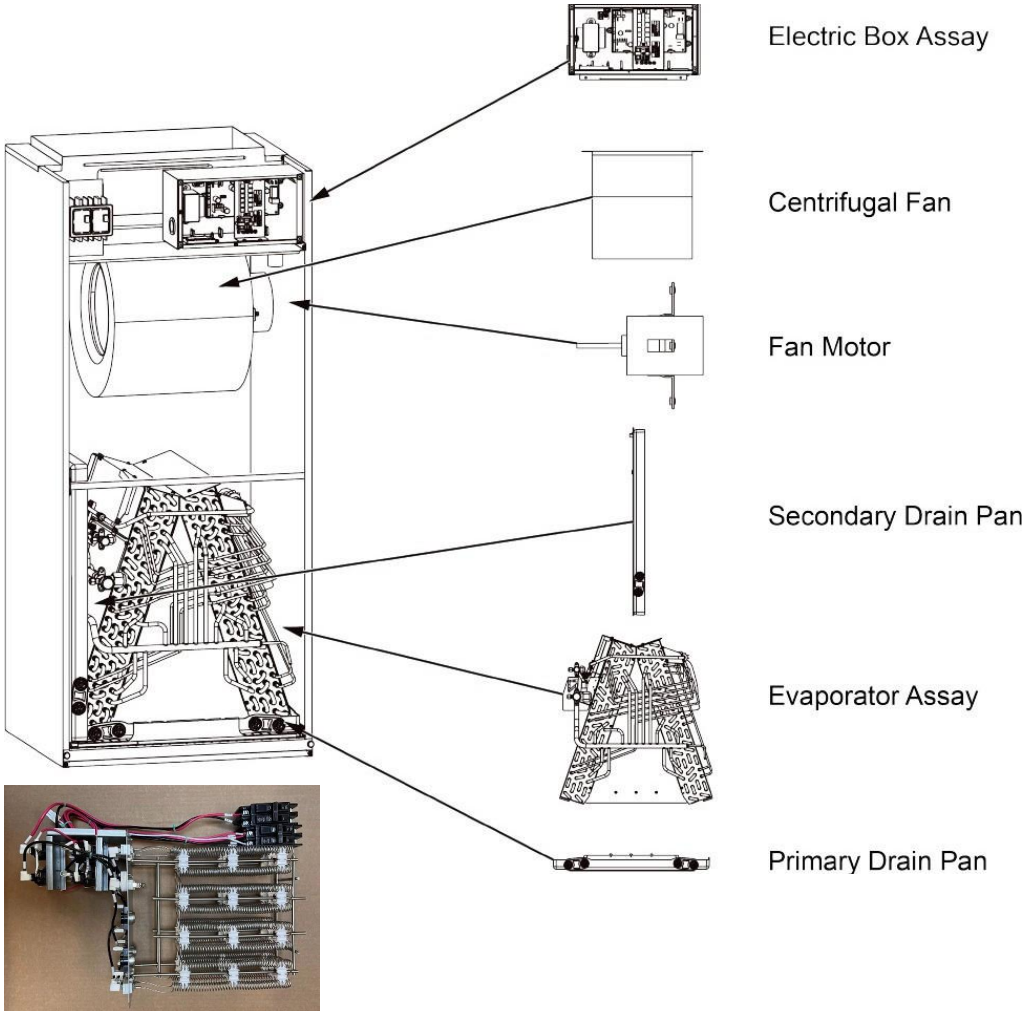
Horizontal Left Configuration - No Modification Needed



Horizontal Right Configuration - Must Relocate Drain Pan

TOSOT

ACCESSORY HEATER AND GENERAL INFORMATION: TUD36-24AH2ADU

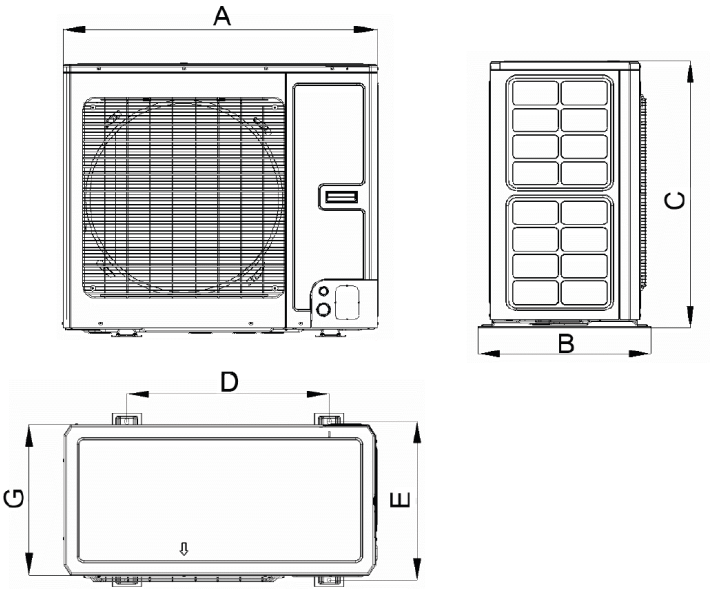


Heat Kit Model	Dimension WxHxL (inch)	Primary Heating Capacity(BTU)	Weight (lbs)	Electric Heat (kw)		Min. Circuit (A)		Max.Fuse or Breaker (A)	
				240V	208V	240V	208V	240V	208V
TUD-Heat Kit-5KW	12 x 5 x 17	12,800~17,000	3.3	5	3.76	26.0	22.6	30	25
TUD-Heat Kit-8KW		20,400~27,300	3.5	8	6	41.7	36.0	45	40
TUD-Heat Kit-10KW		25,600~43,100	3.6	10	7.51	52.0	45.0	60	45
TUD-Heat Kit-15KW	12 x 5 x 19	38,300~51,100	4.4	15	11.25	52 & 26	45 & 22.6	60 & 30	45 & 25

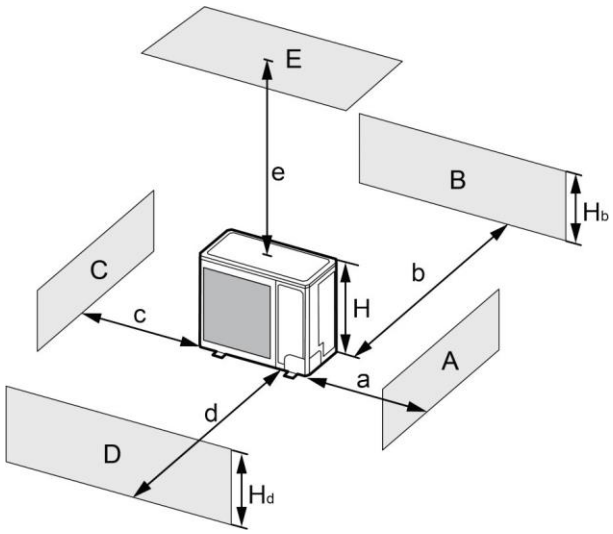
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DIMENSIONS & CLEARANCES: TU36-24WADU



Dimensions	
A	37
B	20 1/8
C	32 1/4
D	24
E	19 1/8
G	18 1/8



Obstacle/Wall A~E	Obstacle/Wall Hb Hd H		Clearance (in)				
			A	b	c	d	e
B	—		-	⩾4	-	-	-
A,B,C,	—		⩾12	⩾4	⩾4	-	-
B,E	—		-	⩾4	-	-	⩾10
A,B,C,E	—		⩾12	⩾6	⩾6	-	⩾40
A,C,E	—		⩾8	-	⩾20	-	⩾10
D	—		-	-	-	⩾40	-
D,E	—		-	-	-	⩾40	⩾40
B,D	Hb < Hd	Hd > H	-	⩾4	-	⩾40	-
	Hb > Hd	Hd < H	-	⩾4	-	⩾40	-
B,D,E	Hb < Hd	Hb⩽1/2H	-	⩾10	-	⩾80	⩾40
		1/2H < Hb⩽H	-	⩾10	-	⩾80	⩾40
		Hb > H	Prohibited				
	Hb > Hd	Hd⩽1/2H	-	⩾4	-	⩾80	⩾40
		1/2H < Hd⩽H	-	⩾200	-	⩾80	⩾40
		Hd > H	Prohibited				

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