A-COIL for UNITARY SIDE DISCHARGE SPLIT SYSTEM 24VAC CONTROL

36,000 BTU / H UNITARY HEAT PUMP SPLIT SYSTEM

SUBMITTAL DATA: TCAT36F/NaA TU36-24WADU

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

SYSTEM TYPE:
HEAT PUMP



TU36-24WADU



TCAT36F/NaA

GENERAL FEATURES

- High Efficiency DC Inverter Technology
- Compact and Quiet 52 dB(A) Outdoor Unit
- Zero Lot Line Design
- Compatible with TOSOT or Competitive Indoor Unit
- Designed for New Construction or Retrofit Market
- 24VAC Thermostat Compatible
- 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 - 1500Hr Salt Spray)
- Indoor Coil has Copper Tube/Aluminum Fin with Acetal-Resin Coating (Blue Fin - 500Hr Salt Spray)
- Limited Warranty: 10 Year Parts, 10 Years Compressor
- Residential & Commercial

SYSTEM PERFORMANCE			
Cooling	Rated Capacity @ 95°F	Btu/h	32,000
	Min-Max Capacity	Btu/h	18,000 ~ 37,000
Heating	Rated Capacity @ 47°F	Btu/h	34,000
	Rated Capacity @ 17°F	Btu/h	22,000
	Rated Capacity @ 5°F	Btu/h	24,000
	Min-Max Capacity	Btu/h	18,000 ~ 38,000
SEER2 / EER2			15.2 / 9.5
HSPF2			8.5
COP @47°F			3.5
COP @ 5°F			1.8
AHRI Number			212361366
Cooling Temperature Range		°F / °C	5 ~ 129 / -15~54
Heating Temperature Range		°F / °C	-22 ~ 75 / -30~24
INDOOR UNIT			**TCAT36H/NaA**
Dehumidification		pt/hr	9.68
Condensate Drain Hose Size(OD)		in	3/4
Unit Dimension (WxHxD)		in	17-1/2 x 23 x 21-1/4
Refrigerant Pre-charged (R410A)		oz	8.8
Weight (Net / Gross)		lbs	64/75
OUTDOOR UNIT			**TU36-24WADU**
Compressor Type			Inverter Rotary
Compressor RLA		A	16
Fan Motor Output Power		W	149
Fan Motor		A	1.5
Sound Pressure Level		dB(A)	52 (45~56)
Unit Dimension (WxHxD)		In	37 x 32-1/4 x 18-1/8
Weight (Net / Gross)		lbs	217 / 240
Refrigerant Pre-charged (R410A)		oz	148
Coil Type (Golden Fin)			Copper Tube / Aluminum Fin
REFRIGERANT PIPING			
Line Set Size (Liquid - Gas)		in	3/8 - 3/4
Pre-charged Piping Length		ft	31
Additional Charge		oz/ft	0.32
Toal Pipe Length (Min - Max)		ft	10 – 164
Max. Pipe Elevation		ft	98
ELECTRICAL			
Power Supply			208/230V / 1Ph / 60 Hz
Outdoor Unit	Rated Current (Cooling / Heating)	A	21 / 25
	MCA / MOCP	A	24 / 35
Main Power Wire Size		AWG	Size Per Local Code
LIMITED WARRANTY	10 Year Parts, 10 Years Compressor - Residential & Commercial		

TOSOT

EXTENDED RATINGS: TCAT36F/NaA 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	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: TCAT36F/NaA 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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FEATURES SUMMARY: TCAT36F/NaA TU36-24WADU

SYSTEM FEATURES	
Compressor	Inverter
Ultra Low Frequency Torque Control	YES
Power Factor Correction	YES
Compressor Type	Rotary + Enhance Vapor Injection
Refrigerant Type	R410A
Outdooor Electronic Expansion Valve (EEV)	YES
Indoor TXV Control Required	YES
Basepan With Electric Heater	YES
Compressor With Electric Heater	YES
Fin Coating (Outdoor - Golden & Indoor - Blue)	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
Support Backup Heating	YES

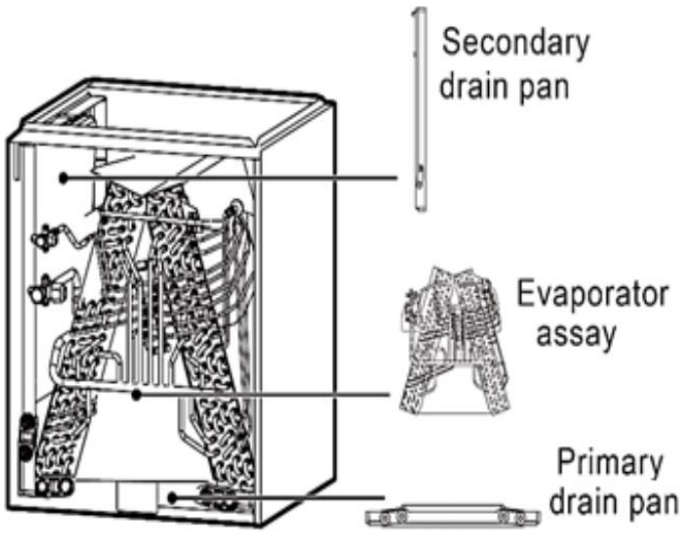
EXTERNAL STATIC PRESSURE

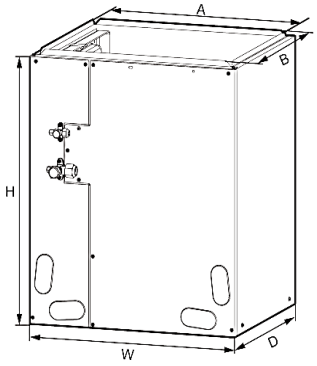
UNIT: inwc	STANDARD CFM											
	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
TCAT24F/NaA	0.140	0.172	0.215	0.262	0.312	0.368	0.433	0.497	0.563			
TCAT36F/NaA	0.148	0.179	0.224	0.267	0.320	0.377	0.439	0.505	0.570			

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STRUCTURE & INSTALLATION INFORMATION: TCAT36F/NaA

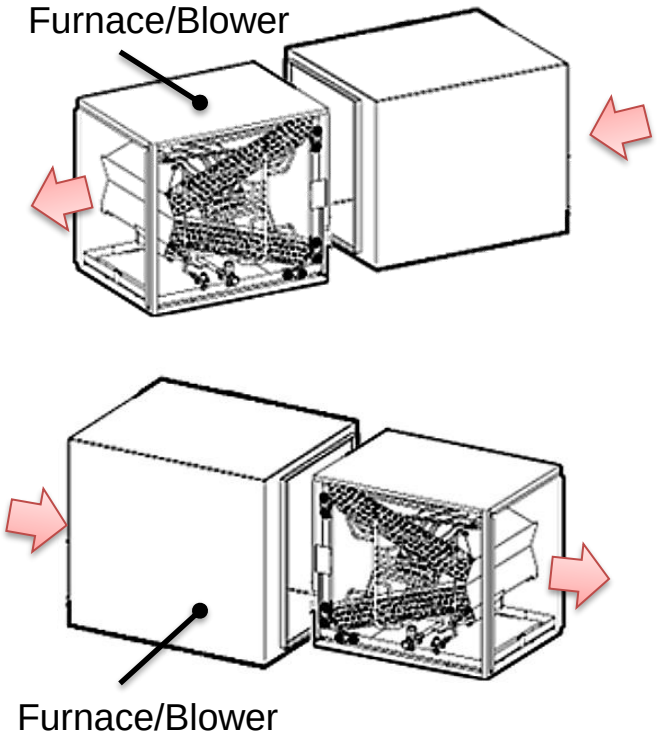




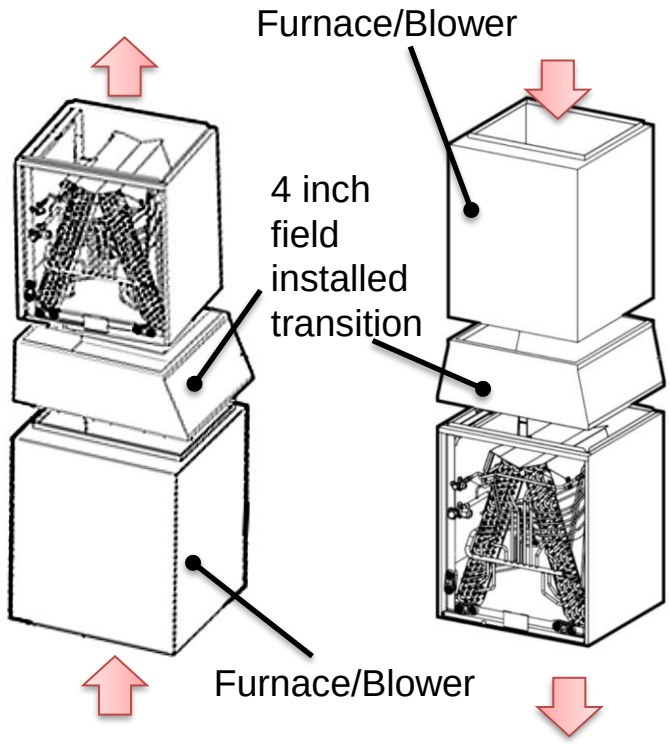
Unit: inch(mm)

Model	Dimension				
	W	D	H	A	B
TCAT24F/NaA	17-1/2(445)	21-1/4(540)	23(584)	15-7/8(403)	19-3/8(492)
TCAT36F/NaA	17-1/2(445)	21-1/4(540)	23(584)	15-7/8(403)	19-3/8(492)
TCAT48H/NaA	24-1/2(622)	21-1/4(540)	28-1/2(724)	22-7/8(581)	19-3/8(492)
TCAT60H/NaA	24-1/2(622)	21-1/4(540)	28-1/2(724)	22-7/8(581)	19-3/8(492)

❑ Horizontal Installation



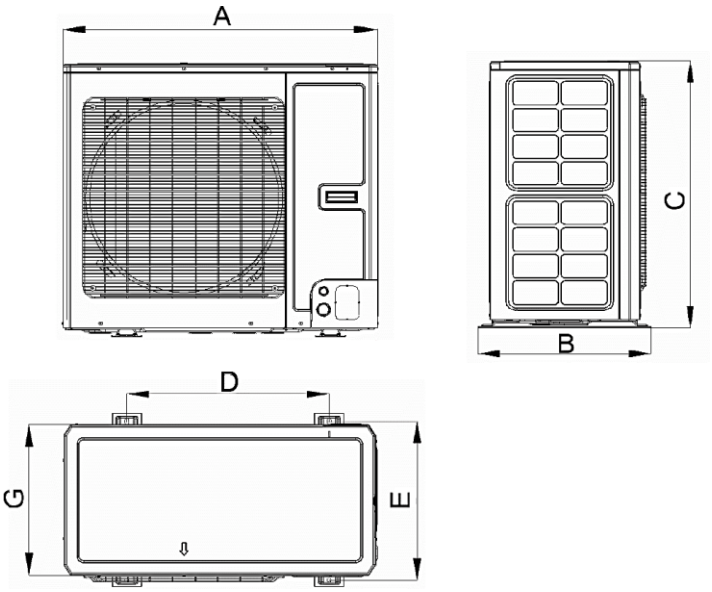
❑ Vertical Installation



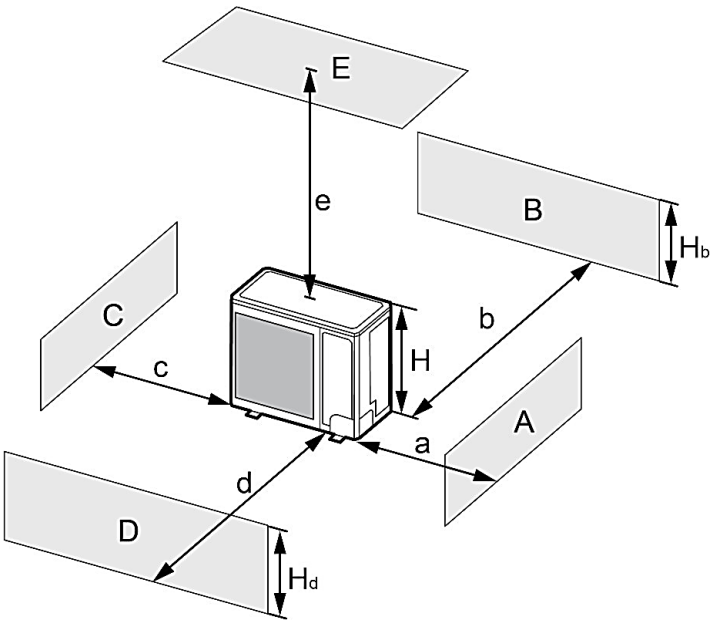
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DIMENSIONS & CLEARANCES: TU36-24WADU



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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