



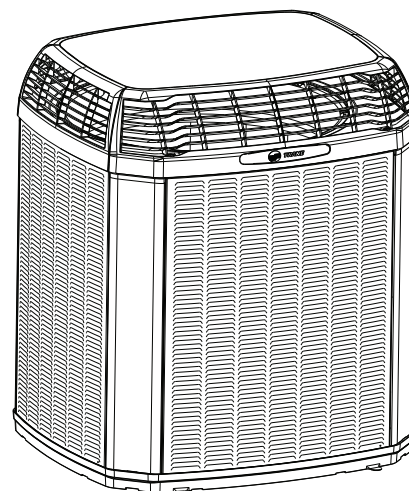
Product and Submittal Data

20 TruComfort™ Variable Speed Heat Pumps with WeatherGuard™

5TWV0X24A1000A/B
5TWV0X36A1000A/B
5TWV0X48A1000A/B
5TWV0X60A1000A/B



The Diagnostics Mobile App is available by scanning a QR code above, the one located inside this unit or by searching for the Trane or American Standard Diagnostics App in your App Store®. This system must include a A/T HUI2360A200U thermostat and a TSYS2C60A2VVU system controller to operate and is Link communicating only.



Note: Graphics in this document are for representation only.
Actual model may differ in appearance.



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Data Notes

This document supersedes and includes data from the documents listed below.

Table 1. Data notes

Literature Number	Title
ODR-PRD003*-EN	Link Variable Speed Heat Pumps 5TWV0 Product Data
TH02-PRQ001*-EN	Trane Link Variable Speed Air Conditioners: 5TWV0X24A1000A Submittal
TH03-PRQ001*-EN	Trane Link Variable Speed Air Conditioners: 5TWV0X36A1000A Submittal
TH04-PRQ001*-EN	Trane Link Variable Speed Air Conditioners: 5TWV0X48A1000A Submittal
TH06-PRQ001*-EN	Trane Link Variable Speed Air Conditioners: 5TWV0X60A1000A Submittal



Table of Contents

Model Nomenclature	4
General Data	5
Product Specifications	6
Sound Data.....	9
Wiring Diagram	10
Dimensional Data.....	11
Balance Point Heat Capacity Worksheets	12
Mechanical Specification Options.....	14



Model Nomenclature

Outdoor Units

Digit 1 — Refrigerant Type

5 = R-454B

Digit 2 — Brand

T = Trane

Digit 3 — System Type

C = Cold Climate Heat Pump

T = AC

W = HP

Digit 4 — Product Family

A = Light Commercial

B = XB

R = Wire Top Grille

V = VSPD

X = WeatherGuard Top

Digit 5 — Nominal Rated SEER2

0 = 20 SEER2

3 = 13 SEER2

4 = 14 SEER2

5 = 15 SEER2

6 = 16 SEER2

7 = 17 SEER2

8 = 18 SEER2

Digit 6 — Field Connection

0 = Brazed

5 = Mechanical

X = Link™

Digit 7, 8 — Nominal Tonnage

12 = 1.0

18 = 1.5

19 = 1.5

24 = 2.0

25 = 2.0

30 = 2.5

31 = 2.5

36 = 3.0

37 = 3.0

42 = 3.5

43 = 3.5

48 = 4.0

49 = 4.0

60 = 5.0

61 = 5.0

72 = 6.0

Digit 9 — Major Design Change

A Thru Z Mode = No F, I, 0

Digit 10 — Power Supply (Voltage/Phz/Hz)

1 = 200-208-230/1/60

3 = 200-230/3/60

4 = 460/3/60

5 = 400/3/60

A = 220-240/1/50

D = 380-415/3/50

Digit 11, 12, 13 — Other Functions

000 = Typical-no meaning

B = XB

R = Wire Top Grille

V = VSPD

X = WeatherGuard Top

Digit 14 — Minor Design Change

A Thru Z Mode = No F, I, 0

Digit 14 — Service Digit - Not Orderable

A Thru Z Mode = No F, I, 0



General Data

AHRI standard 210/240 rating conditions:

- Cooling: 80°F DB; air entering indoor coil: 67°F WB; air entering outdoor coil: 95°F DB
- High temperature heating: 47°F DB; air entering outdoor coil: 43°F WB; entering indoor coil: 70°F DB
- Low temperature heating: 17°F DB; air entering outdoor coil: 15°F WB; air entering indoor coil: 70°F DB
- Rated indoor airflow for heating is the same as for cooling.

AHRI standard 270 rating conditions:

The noise rating numbers are determined with the unit in cooling operation. Standard Noise Rating number is at 95°F outdoor air.



Product Specifications

Table 2. Models 5TWV0X24A1000A, 5TWV0X24A1000B, 5TWV0X36A1000A, and 5TWV0X36A1000B

Outdoor Unit ^{(a) (b)}	5TWV0X24A1000A	5TWV0X24A1000B	5TWV0X36A1000A	5TWV0X36A1000B
Power Conns. — V/Ph/Hz ^(c)	208/230/1/60	208/230/1/60	208/230/1/60	208/230/1/60
Min. Brch. Cir. Ampacity	19	19	26	26
Br. Cir. Prot. Rtg. — Rec/ Max. (Amps)	30	20/30	40	30/40
Compressor	Rotary	Rotary	Scroll	Scroll
No. Used — No. Speeds	1-Variable	1-Variable	1-Variable	1-Variable
MRC	17.8	17.8	18	18
Factory Installed				
Start Components ^(d)	No	No	No	No
Insulation/Sound Blanket	Yes	Yes	Yes	Yes
Compressor Heat	Yes	Yes	Yes	Yes
Outdoor Fan				
Dia. (In.) — No. Used	23-1	23-1	27.5-1	27.5-1
Type Drive — No. Speeds	Direct-Variable	Direct-Variable	Direct-Variable	Direct-Variable
No. Motors — Hp	1-1/3	1-1/3	1-1/2	1-1/2
Motor Speed R.P.M.	200-1200	200-1200	200-1200	200-1200
Volts/Ph/Hz	245-385/3/60	245-385/3/60	245-385/3/60	245-385/3/60
MOC	1.5	1.5	2.3	2.3
Outdoor Coil — Type	Spine Fin™	Spine Fin™	Spine Fin™	Spine Fin™
Rows — F.P.I.	1-24	1-24	1-24	1-24
Face Area (Sq. Ft.)	19.77	19.77	30.8	30.8
Tube Size (In.)	3/8	3/8	3/8	3/8
Refrigerant	R-454B	R-454B	R-454B	R-454B
Lbs. — R-454B (O.D. Unit) ^(e)	6 Lb-8 Oz	6 Lb-8 Oz	9 Lb-8 Oz	9 Lb-8 Oz
Factory Supplied	Yes	Yes	Yes	Yes
Rated Line Size — In. O.D. Gas ^(f)	1/2	1/2	5/8	5/8
Rated Line Size — In. O.D. Liq. ^(f)	5/16	5/16	5/16	5/16
Charging Specifications				
Subcooling	10°	10°	8°	8°
Dimensions	H x W x D	H x W x D	H x W x D	H x W x D
Crated (In.)	50 x 30 x 33	50 x 30 x 33	55 x 35 x 38	55 x 35 x 38
Weight				
Shipping (Lbs.)	211	211	248	248
Net (Lbs.)	192	192	222	222
Optional Accessories				

Table 2. Models 5TWV0X24A1000A, 5TWV0X24A1000B, 5TWV0X36A1000A, and 5TWV0X36A1000B (continued)

Outdoor Unit ^{(a) (b)}	5TWV0X24A1000A	5TWV0X24A1000B	5TWV0X36A1000A	5TWV0X36A1000B
Rubber Isolator Kit	BAYISLT101	BAYISLT101	BAYISLT101	BAYISLT101
Snow Leg — Base and Cap 4-in. High	BAYLEGS002	BAYLEGS002	BAYLEGS002	BAYLEGS002
Snow Leg — 4-in. Extension	BAYLEGS003	BAYLEGS003	BAYLEGS003	BAYLEGS003
SmartCharge™ Tool	BAYCAKT002	BAYCAKT002	BAYCAKT002	BAYCAKT002
Extreme Condition Mounting Kit	BAYECMT023	BAYECMT023	BAYECMT023	BAYECMT023
Refrigerant Lineset ^(g)	—			

^(a) Certified in accordance with the Unitary Air-conditioner equipment certification program which is based on AHRI standard 210/240.

^(b) Rated in accordance with AHRI standard 270/275.

^(c) Calculated in accordance with N.E.C. Only use HACR circuit breakers or fuses.

^(d) No means no start components. Yes means quick start kit components. PTC means positive temperature coefficient starter. Optional kit shown.

^(e) This value approximate. For more precise value see unit nameplate.

^(f) Reference the outdoor unit ship-with literature for refrigerant piping length and lift guidelines. Reference the refrigerant piping software pub # 32-3312-xx or *Refrigerant Piping Manual for Small Split Cooling and Heat Pump Systems Application Guide* (SS-APG006*-EN) for long line sets or specialty applications (xx denotes latest revision).

^(g) 25, 30, 35 and 50 foot linesets available. For a complete listing of lineset options available from equipment or supply stores, refer to the Trane Residential and Light Commercial Product Handbook.

Table 3. Models 5TWV0X48A1000A, 5TWV0X48A1000B, 5TWV0X60A1000A, and 5TWV0X60A1000B

Outdoor Unit ^{(a) (b)}	5TWV0X48A1000A	5TWV0X48A1000B	5TWV0X60A1000A	5TWV0X60A1000B
Power Conns. — V/Ph/Hz ^(c)	208/230/1/60	208/230/1/60	208/230/1/60	208/230/1/60
Min. Brch. Cir. Ampacity	32	32	43	40
Br. Cir. Prot. Rtg. — Rec/ Max. (Amps)	50	35/50	60	40/60
Compressor	Scroll	Scroll	Rotary	Rotary
No. Used — No. Speeds	1-Variable	1-Variable	1-Variable	1-Variable
MRC	22.4	22.4	46.1	46.1
Factory Installed				
Start Components ^(d)	No	No	No	No
Insulation/Sound Blanket	Yes	Yes	Yes	Yes
Compressor Heat	Yes	Yes	Yes	Yes
Outdoor Fan				
Dia. (In.) — No. Used	27.5-1	27.5-1	27.5-1	27.5-1
Type Drive — No. Speeds	Direct-Variable	Direct-Variable	Direct-Variable	Direct-Variable
No. Motors — Hp	1-1/2	1-1/2	1-1/2	1-1/2
Motor Speed R.P.M.	200-1200	200-1200	200-1200	200-1200
Volts/Ph/Hz	245-385/3/60	245-385/3/60	245-385/3/60	245-385/3/60
MOC	2.3	2.3	2.3	2.3
Outdoor Coil — Type	Spine Fin™	Spine Fin™	Spine Fin™	Spine Fin™
Rows — F.P.I.	2-24	2-24	2-24	2-24
Face Area (Sq. Ft.)	30.8	30.8	30.8	30.8
Tube Size (In.)	3/8	3/8	3/8	3/8
Refrigerant	R-454B	R-454B	R-454B	R-454B
Lbs. — R-454B (O.D. Unit) ^(e)	11 Lb-0 Oz	11 Lb-0 Oz	11 Lb-10 Oz	11 Lb-10 Oz



Product Specifications

Table 3. Models 5TWV0X48A1000A, 5TWV0X48A1000B, 5TWV0X60A1000A, and 5TWV0X60A1000B (continued)

Outdoor Unit ^(a) ^(b)	5TWV0X48A1000A	5TWV0X48A1000B	5TWV0X60A1000A	5TWV0X60A1000B
Factory Supplied	Yes	Yes	Yes	Yes
Rated Line Size — In. O.D. Gas ^(f)	7/8	7/8	3/4	3/4
Rated Line Size — In. O.D. Liq. ^(f)	5/16	5/16	5/16	5/16
Charging Specifications				
Subcooling	8°	8°	8°	8°
Dimensions				
H x W x D	H x W x D	H x W x D	H x W x D	H x W x D
Crated (In.)	55 x 35 x 38	55 x 35 x 38	55 x 35 x 38	55 x 35 x 38
Weight				
Shipping (Lbs.)	268	268	306	306
Net (Lbs.)	242	242	280	280
Optional Accessories				
Rubber Isolator Kit	BAYISLT101	BAYISLT101	BAYISLT101	BAYISLT101
Snow Leg — Base and Cap 4-in. High	BAYLEGS002	BAYLEGS002	BAYLEGS002	BAYLEGS002
Snow Leg — 4-in. Extension	BAYLEGS003	BAYLEGS003	BAYLEGS003	BAYLEGS003
SmartCharge™ Tool	BAYCAKT002	BAYCAKT002	BAYCAKT002	BAYCAKT002
Extreme Condition Mounting Kit	BAYECMT023	BAYECMT023	BAYECMT023	BAYECMT023
Refrigerant Lineset ^(g)	—			

^(a) Certified in accordance with the Unitary Air-conditioner equipment certification program which is based on AHRI standard 210/240.

^(b) Rated in accordance with AHRI standard 270/275.

^(c) Calculated in accordance with N.E.C. Only use HACR circuit breakers or fuses.

^(d) No means no start components. Yes means quick start kit components. PTC means positive temperature coefficient starter. Optional kit shown.

^(e) This value approximate. For more precise value see unit nameplate.

^(f) Reference the outdoor unit ship-with literature for refrigerant piping length and lift guidelines. Reference the refrigerant piping software pub # 32-3312-xx or *Refrigerant Piping Manual for Small Split Cooling and Heat Pump Systems Application Guide* (SS-APG006*-EN) for long line sets or specialty applications (xx denotes latest revision).

^(g) 25, 30, 35 and 50 foot linesets available. For a complete listing of lineset options available from equipment or supply stores, refer to the Trane Residential and Light Commercial Product Handbook.



Sound Data

Table 4. Models 5TWV0X24A, 5TWV0X36A, 5TWV0X48A, and 5TWV0X60A

Model	Mode	Speed	A-Weighted Sound Power Level [dB (A)]	Full Octave Sound Power [dB]							
				63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
5TWV0X24A	Cool	Min	52	64.2	48.8	52.0	52.3	44.6	37.1	34.2	33.7
	Cool	Max	64	69.5	62.6	59.5	64.4	59.5	50.5	47.0	42.4
	Heat	Min	51	61.4	45.8	50.9	49.9	44.9	39.2	37.6	38.0
	Heat	Max	71	73.9	70.7	68.7	70.0	67.2	59.9	55.2	49.8
5TWV0X36A	Cool	Min	53	63.6	51.2	52.5	51.5	48.2	43.4	34.7	38.3
	Cool	Max	69	82.2	70.3	68.3	65.6	65.5	58.3	53.3	48.9
	Heat	Min	55	63.8	52.9	55.9	53.4	49.1	44.4	40.4	42.1
	Heat	Max	74	79.0	77.8	75.0	71.8	69.9	63.3	59.5	53.7
5TWV0X48A	Cool	Min	56	64.8	54.6	56.2	53.6	52.4	47.4	38.0	33.0
	Cool	Max	73	79.7	74.4	72.7	71.3	68.4	63.7	58.2	49.8
	Heat	Min	57	64.8	54.9	56.4	53.6	51.3	48.7	45.5	40.1
	Heat	Max	75	82.1	75.5	74.5	72.2	69.7	65.4	61.2	52.8
5TWV0X60A	Cool	Min	63	62.1	56.5	60.2	61.7	61.6	45.4	37.4	38.2
	Cool	Max	74	75.5	74.2	73.1	73.5	68.6	63.6	59.2	51.8
	Heat	Min	61	64.6	56.0	57.4	58.2	59.1	46.4	42.6	39.2
	Heat	Max	73	87.3	77.8	72.0	71.2	67.2	63.3	60.4	52.1

Note: Rated in accordance with AHRI Standard 270.

APPROVED	ALTERNATE
APPROVED WHITE INSULATING FACED TACK, 2.5 A.S. THICKNESS WITH 18 MIL ADHESIVE THICKNESS 2.8 MIL	ALTERNATE WHITE FACED TACK, 2.5 A.S. PAPER THICKNESS WITH ADHESIVE 18 A.S. MIL
18 MIL	18 MIL
27A THICKNESS OF MATS, ADHESIVE AND LINER	27A 1/2 SHINY CARBONIZED GRAY TACK MILS, 1.5 P-1 MILS TACK
1.0 MILS	0.4 MILS
C-125F	C4500 BINDER BASED ADHESIVE
TEMPERATURE RANGE -45F TO 250F	-45F TO 160F

R-448B REFRIGERANT CHARGING CHART					
LIQUID TEMP (°F)	DESIGN SUBCOOLING (°F)				LIQUID GAS PRESSURE (PSI)
	8	9	10	11	
35	170	172	175	178	181
40	164	167	170	173	176
45	159	162	165	168	171
50	154	157	160	163	166
55	150	153	156	159	162
60	146	149	152	155	158
65	142	145	148	151	154
70	139	142	145	148	151
75	136	139	142	145	148
80	133	136	139	142	145
85	130	133	136	139	142
90	127	130	133	136	139
95	124	127	130	133	136
100	121	124	127	130	133
105	118	121	124	127	130
110	115	118	121	124	127
115	112	115	118	121	124
120	109	112	115	118	121
125	106	109	112	115	118
130	103	106	109	112	115
135	100	103	106	109	112
140	97	100	103	106	109
145	94	97	100	103	106
150	91	94	97	100	103
155	88	91	94	97	100
160	85	88	91	94	97
165	82	85	88	91	94
170	79	82	85	88	91
175	76	79	82	85	88
180	73	76	79	82	85
185	70	73	76	79	82
190	67	70	73	76	79
195	64	67	70	73	76
200	61	64	67	70	73
205	58	61	64	67	70
210	55	58	61	64	67
215	52	55	58	61	64
220	49	52	55	58	61
225	46	49	52	55	58
230	43	46	49	52	55
235	40	43	46	49	52
240	37	40	43	46	49
245	34	37	40	43	46
250	31	34	37	40	43
255	28	31	34	37	40
260	25	28	31	34	37
265	22	25	28	31	34
270	19	22	25	28	31
275	16	19	22	25	28
280	13	16	19	22	25
285	10	13	16	19	22
290	7	10	13	16	19
295	4	7	10	13	16
300	1	4	7	10	13

	FACTORY WIRING
	WIRING
	WIRING LAMP
	WIRING STOP
	WIRING BATTERY
	WIRING THERMISTOR
	WIRING CAPACITOR
	WIRING RESISTOR
	WIRING HEATER
	WIRING MOTOR
	WIRING PUMP
	WIRING VALVE
	WIRING ACTUATOR
	WIRING SWITCH
	WIRING THERMISTOR
	WIRING CAPACITOR
	WIRING RESISTOR
	WIRING HEATER
	WIRING MOTOR
	WIRING PUMP
	WIRING VALVE
	WIRING ACTUATOR
	WIRING SWITCH
	WIRING THERMISTOR
	WIRING CAPACITOR
	WIRING RESISTOR
	WIRING HEATER
	WIRING MOTOR
	WIRING PUMP
	WIRING VALVE

Dimensional Data

Figure 2. Dimensional drawing

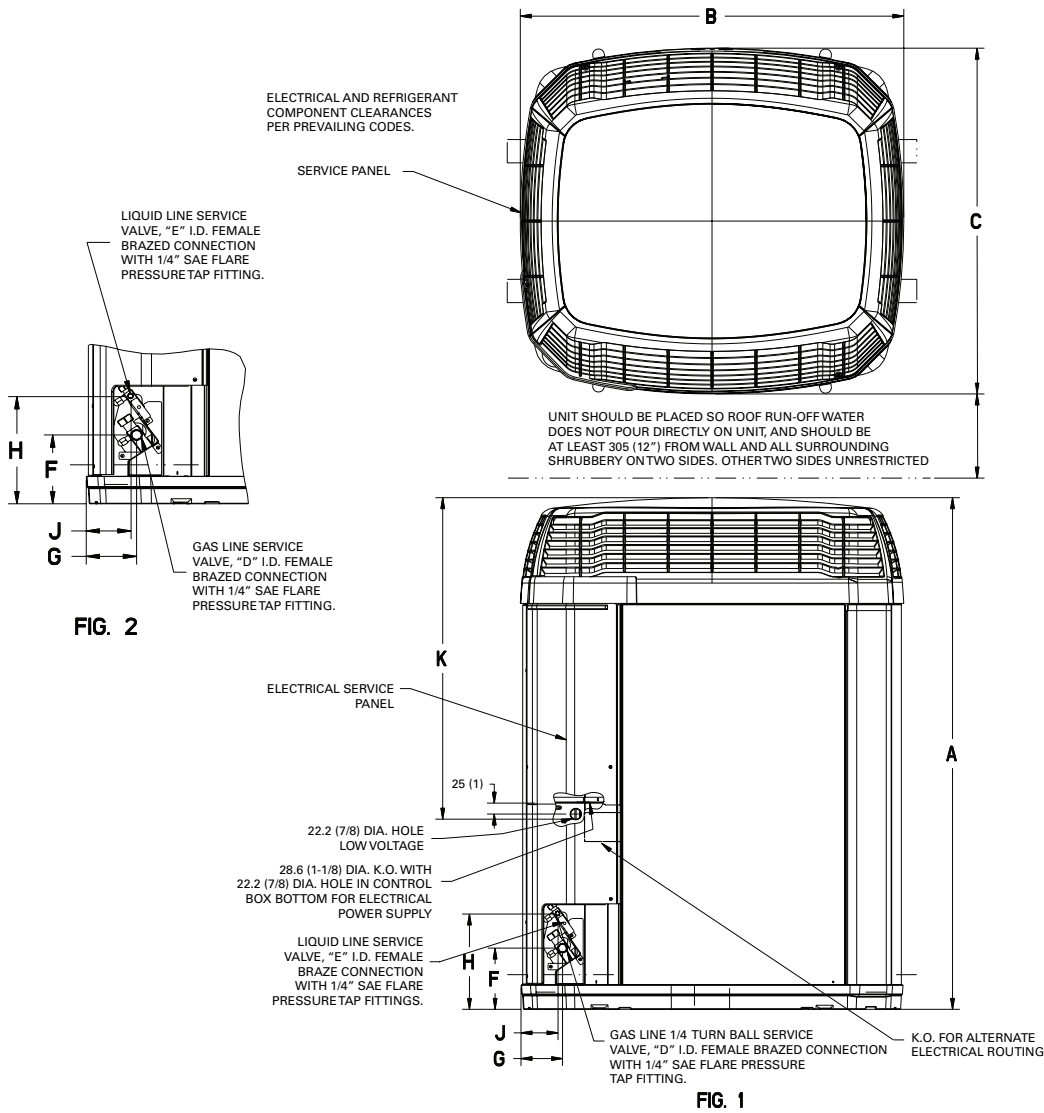


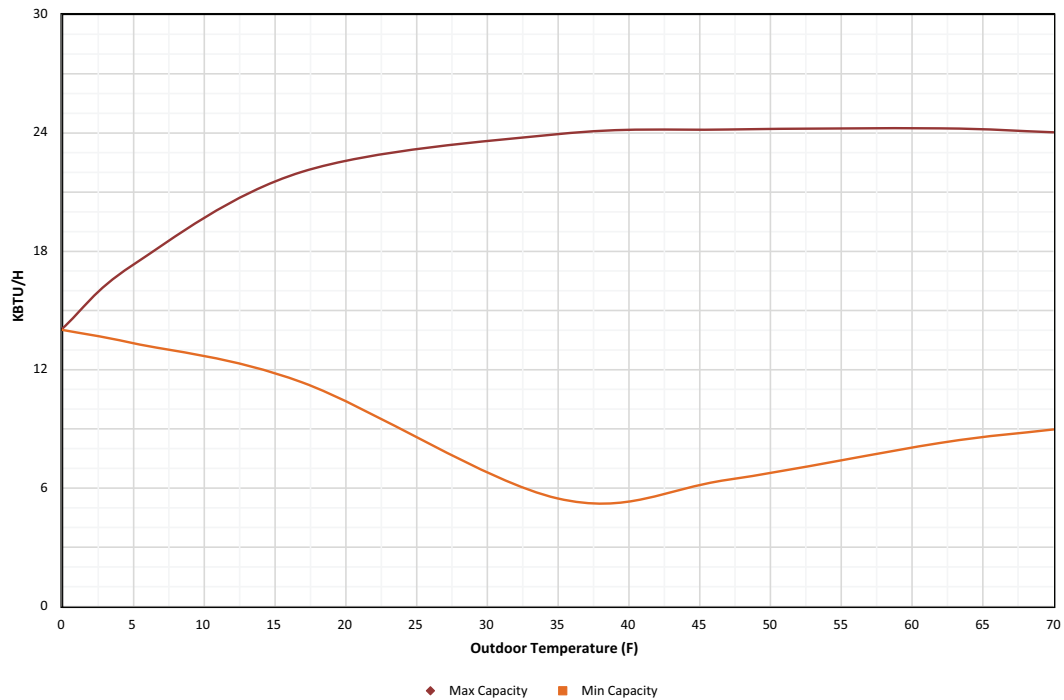
Table 5. Dimensions (inch)

Model	Base	A	B	C	D	E	F	G	H	J	K
5TWV0X24A	3	1178.1 (46.4)	829 (32-5/8)	756 (29-3/4)	13 (1/2)	8 (5/16)	143 (5-5/8)	92 (3-5/8)	210 (8-1/4)	79 (3-1/8)	973.0 (38.3)
5TWV0X36A	4	1307.0 (51.4)	946 (37-1/4)	870 (34-1/4)	16-5/8	8-5/16	143 (5-5/8)	92 (3-5/8)	210 (8-1/4)	79 (3-1/8)	994.1 (39.1)
5TWV0X48A	4	1307.0 (51.4)	946 (37-1/4)	870 (34-1/4)	22-7/8	8-5/16	143 (5-5/8)	92 (3-5/8)	210 (8-1/4)	79 (3-1/8)	994.1 (39.1)
5TWV0X60A	4	1307.0 (51.4)	946 (37-1/4)	870 (34-1/4)	22-7/8	8-5/16	143 (5-5/8)	92 (3-5/8)	210 (8-1/4)	79 (3-1/8)	994.1 (39.1)



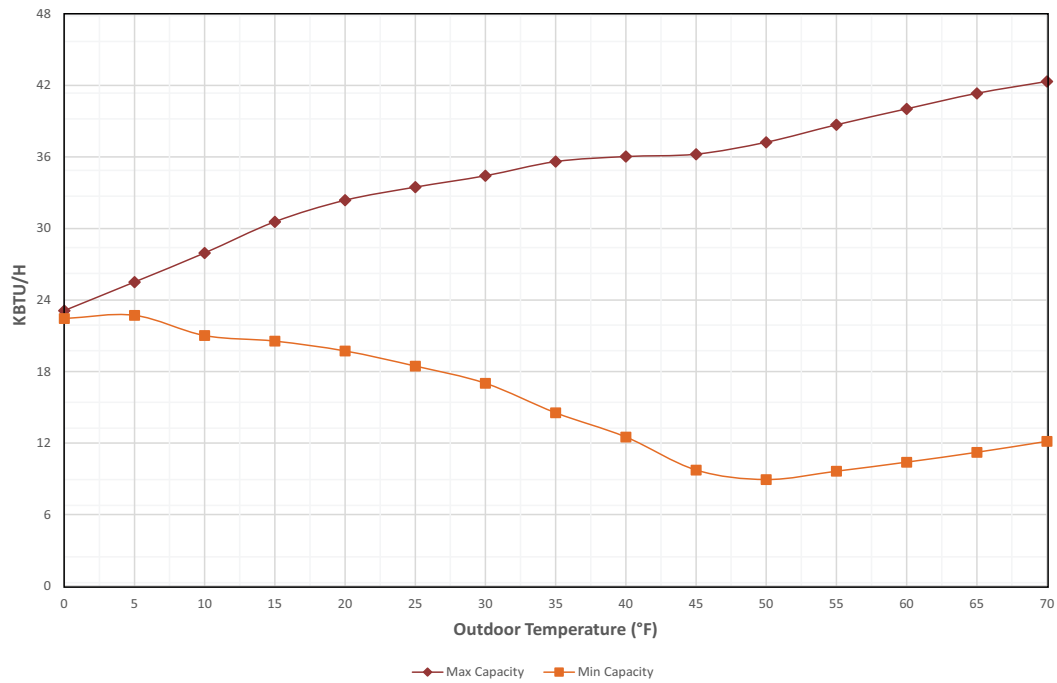
Balance Point Heat Capacity Worksheets

Figure 3. 2-ton heating capacity – model 5TWV0X24A1



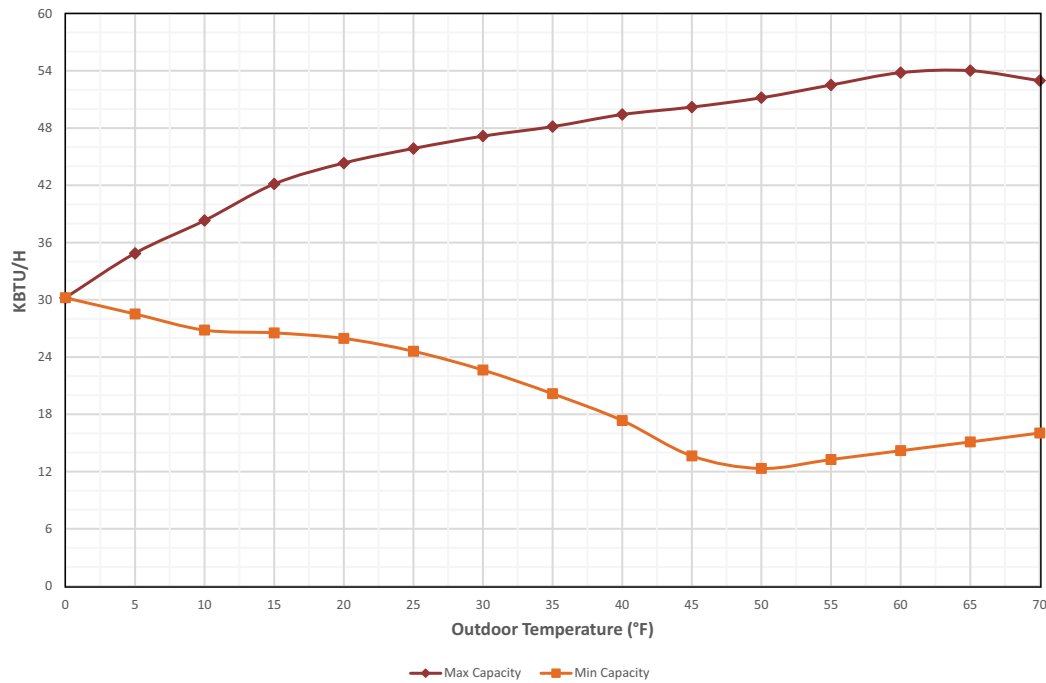
Note: Based on 70°F Indoor Return Air.

Figure 4. 3-ton heating capacity – model 5TWV0X36A1



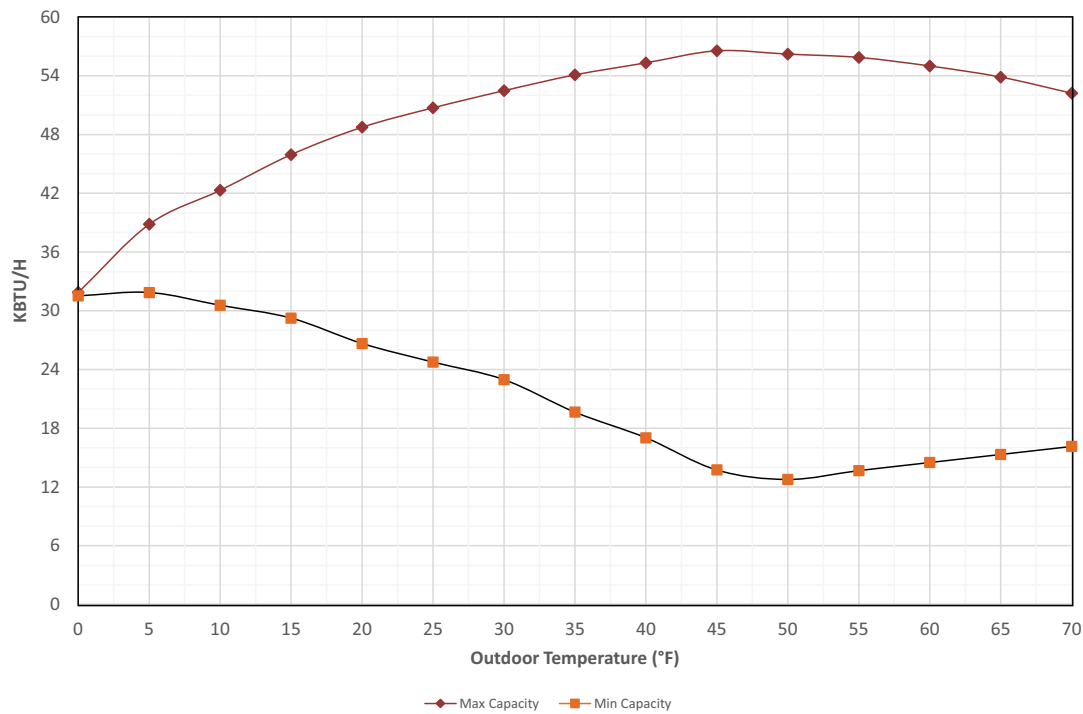
Note: Based on 70°F Indoor Return Air.

Figure 5. 4-ton heating capacity – model 5TWV0X48A1



Note: Based on 70°F Indoor Return Air.

Figure 6. 5-ton heating capacity – model 5TWV0X60A1



Note: Based on 70°F Indoor Return Air.



Mechanical Specification Options

General

This unit is designed to operate at outdoor ambient temperatures from 55° F to 120° F in cooling. From — 0° F to 66° F in heating (heat pumps only). Only AHRI approved indoor matches are approved for use with these models.

Trane Link Air Conditioners

This outdoor unit contains the Trane Link Air Conditioners digital communication with Plug-n-Play set up.

Casing

Unit casing is constructed of heavy gauge. G60 galvanized steel and painted with a weather-resistant powder paint on all louvered panels and prepaint on all other panels. Corrosion and weatherproof CMBP-G30 DuraTuff™ base.

WeatherGuard™ II Top Shields Unit.

Refrigerant Controls

Refrigeration system controls include condenser fan, compressor inverter drive and high and low pressure switches. A factory supplied, field installed filter is standard.

Compressor

Inverter driven compressor with variable output capacities. Noise enclosure minimizes sound levels. Compressor protections reduce operating speed and current draw to maintain operation while protecting the compressor.

Condenser Coil

The Spine Fin™ outdoor coil provides low airflow resistance and efficient heat transfer. The coil is protected on all four sides by louvered panels.

Seacoast Shield.

Low Ambient Cooling

As manufactured, this system has built in freeze protection that will allow cooling operation below 55°F but will reduce capacity or shut down completely to prevent operation under adverse conditions.

Comfort Control

This system must include a A/T HUI2360A200U thermostat and a TSYS2C60A2VVU system controller to operate and is Link communicating only.



Trane - by Trane Technologies (NYSE: TT), a global innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or tranetechnologies.com.



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