



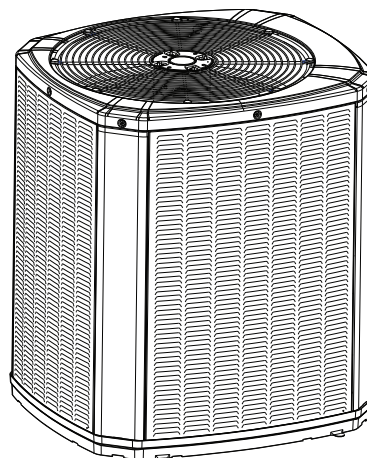
Product and Submittal Data

18 TruComfort™ Variable Speed Heat Pumps

5TWV8X24A1000A/B
5TWV8X36A1000A/B
5TWV8X48A1000A/B
5TWV8X60A1000A/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
22-1989-1*-EN	Link Variable Speed Heat Pump 5TWV8 Product Data
TH82-PRQ001*-EN	Trane Link Variable Speed Heat Pump Model 5TWV8X24A1000A
TH84-PRQ001*-EN	Trane Link Variable Speed Heat Pump Model 5TWV8X36A1000A
TH86-PRQ001*-EN	Trane Link Variable Speed Heat Pump Model 5TWV8X48A1000A
TH87-PRQ001*-EN	Trane Link Variable Speed Heat Pump Model 5TWV8X60A1000A



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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

Digit 14 — Minor Design Change

A Thru Z Mode = No F, I, 0

Digit 15 — 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 5TWV8X24A1000A, 5TWV8X24A1000B, 5TWV8X36A1000A, and 5TWV8X36A1000B

Outdoor Unit ^{(a) (b)}	5TWV8X24A1000A	5TWV8X24A1000B	5TWV8X36A1000A	5TWV8X36A1000B
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	19.0	20.0	27.0	29.0
Br. Cir. Prot. Rtg. — Rec/ Max. (Amps)	30	20/30	40	30/40
Compressor	Rotary	Rotary	Rotary	Rotary
No. Used — No. Speeds	1-Variable	1-Variable	1-Variable	1-Variable
MRC	17.8	17.8	27.1	27.1
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	23 — 1	23 — 1	23 — 1	23 — 1
Type Drive — No. Speeds	Direct - Variable	Direct - Variable	Direct - Variable	Direct - Variable
No. Motors — Hp	1 — 1/3	1 — 1/3	1 — 1/3	1 — 1/3
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	1.5	1.5
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	19.77	19.77
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	6 LB – 7 OZ	6 LB – 7 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°	10°	10°
Dimensions	H x W x D	H x W x D	H x W x D	H x W x D
Crated (In.)	46 x 30 x 33	46 x 30 x 33	46 x 30 x 33	46 x 30 x 33
Weight				
Shipping (Lbs.)	200	200	213	213
Net (Lbs.)	181	181	194	194
Optional Accessories				

Table 2. Models 5TWV8X24A1000A, 5TWV8X24A1000B, 5TWV8X36A1000A, and 5TWV8X36A1000B (continued)

Outdoor Unit ^{(a) (b)}	5TWV8X24A1000A	5TWV8X24A1000B	5TWV8X36A1000A	5TWV8X36A1000B
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 5TWV8X48A1000A, 5TWV8X48A1000B, 5TWV8X60A1000A, and 5TWV8X60A1000B

Outdoor Unit ^{(a) (b)}	5TWV8X48A1000A	5TWV8X48A1000B	5TWV8X60A1000A	5TWV8X60A1000B
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	36.0	34.0	43.0	40.0
Br. Cir. Prot. Rtg. — Rec/ Max. (Amps)	50	35/50	60	40/60
Compressor	Rotary	Rotary	Rotary	Rotary
No. Used — No. Speeds	1-Variable	1-Variable	1-Variable	1-Variable
MRC	39.2	39.2	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.	1–24	1–24	1–24	1–24
Face Area (Sq. Ft.)	27.87	27.87	27.87	27.87
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)	9 LB — 7 OZ	9 LB — 7 OZ	9 LB — 10 OZ	9 LB — 10 OZ



Product Specifications

Table 3. Models 5TWV8X48A1000A, 5TWV8X48A1000B, 5TWV8X60A1000A, and 5TWV8X60A1000B (continued)

Outdoor Unit ^(a) ^(b)	5TWV8X48A1000A	5TWV8X48A1000B	5TWV8X60A1000A	5TWV8X60A1000B
Factory Supplied	Yes	Yes	Yes	Yes
Rated Line Size — In. O.D. Gas ^(f)	3/4	3/4	3/4	3/4
Rated Line Size — In. O.D. Liq. ^(f)	5/16	5/16	5/16	5/16
Charging Specifications				
Subcooling	10°	10°	10°	10°
Dimensions				
Crated (In.)	46 x 35 x 38	46 x 35 x 38	46 x 35 x 38	46 x 35 x 38
Weight				
Shipping (Lbs.)	254	254	264	264
Net (Lbs.)	231	231	241	241
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 5TWV8X24A, 5TWV8X36A, 5TWV8X48A, and 5TWV8X60A

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
5TWV8X24A	Cool	Min	55	67.2	51.8	55.0	55.3	47.6	40.1	37.2	36.7
	Cool	Max	67	72.5	65.6	62.5	67.4	62.5	53.5	50.0	45.4
	Heat	Min	54	64.4	48.8	53.9	52.9	47.9	42.2	40.6	41.0
	Heat	Max	74	76.9	73.7	71.7	73.0	70.2	62.9	58.2	52.8
5TWV8X36A	Cool	Min	58	68.3	58.0	59.3	54.6	53.0	48.0	43.7	41.9
	Cool	Max	74	73.5	75.0	70.2	74.1	68.1	61.7	59.7	52.8
	Heat	Min	56	67.6	56.6	58.6	53.0	50.0	45.9	45.5	45.6
	Heat	Max	76	74.8	77.2	72.0	73.0	72.7	65.4	60.7	56.3
5TWV8X48A	Cool	Min	59	68.6	56.3	65.3	53.6	50.7	45.1	37.3	37.4
	Cool	Max	74	83.9	76.7	73.2	72.7	69.0	64.2	59.2	50.3
	Heat	Min	58	67.5	57.9	62.3	54.9	50.8	46.7	41.8	41.0
	Heat	Max	76	82.5	78.1	74.0	75.2	69.8	65.8	61.9	54.5
5TWV8X60A	Cool	Min	66	64.5	57.8	67.7	64.9	62.7	50.4	41.5	42.7
	Cool	Max	76	77.0	80.8	76.0	75.3	70.1	64.0	62.3	54.7
	Heat	Min	64	68.9	58.8	67.4	64.6	57.9	47.7	43.0	43.8
	Heat	Max	76	91.4	76.3	76.3	73.2	71.2	65.2	64.2	56.5

Note: Rated in accordance with AHRI Standard 270.



LEGEND

24 V } FACTORY
LINE WIRING
24 V } FIELD
LINE WIRING
--- FOR ROTARY COMPRESSOR
DASHED LINE WIRING

MAGNETIC COIL
EARTH GROUND
PROTECTIVE EARTH GROUND
JUNCTION
WIRE NUT OR TERMINAL
THERMISTOR
INTERNAL OVERLOAD PROTECTION
PRESSURE ACTUATED SWITCH
RESISTOR OR HEATING ELEMENT
MOTOR WINDING
SHIELDED CABLE
OPTIONAL

POL-PLUG FEMALE HOUSING (MALE TERMINALS)
POL-PLUG FEMALE HOUSING (FEMALE TERMINALS)

BK/BL - COLOR OF PIPE
BK BLACK RD RED ON OXIDE
BL BLUE WH WHITE BR BROWN
GR GREEN GR GRAY PR PURPLE
PK PINK DR DRAIN

CBS - COIL BOTTOM SENSOR
CDA - COMI DISPLAY ASSEMBLY
VSPR - VARIABLE SPEED COMPRESSOR
EVV - ELECTRONIC EXP VALVE
HPCO - HIGH PRESSURE CUTOUT SWITCH
ODS - OUTDOOR TEMPERATURE SENSOR
SCISOV - SWITCH OVER VALVE SOLENOID
STIS - SUCTON TEMPERATURE SENSOR
PMB - PULSE WITH MODULATED CONN
TTS - TERMINAL BLOCK
DBS - DISCHARGE TEMPERATURE SENSOR
CL - COMMUNICATION LINK
PSC - PERMANENT SPLIT CAPACITOR MOTOR CONN
CS - CHARGE SOLENOID
LS - LOAD SHED
LSS - LIQUID SUPERHEAT SENSOR
AOC - APPLICATION ORIENTED CONTROL
MOC - MOTOR ORIENTED CONTROL
LP-TSD - LIQUID PRESSURE TRANSDUCER

NOTES:
1. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT NAMEPLATE.
2. POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
3. LOW VOLTAGE WIRING TO BE NO. 18 AWG MINIMUM CONDUCTOR.
4. *ONLY USED ON HEAT PUMP MODELS AND NOT ON AC UNITS.

FOR CANADIAN INSTALLATIONS
POUR INSTALLATIONS CANADIENNES
CAUTION: NOT SUITABLE FOR USE ON SYSTEMS EXCEEDING 150V-TO-GROUND ATTENTION: NE CONVIENT PAS AUX INSTALLATIONS DE PLUS DE 150 V A LA TERRE

⚠ WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRICAL POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING UNIT.
Failure to disconnect power before servicing can cause severe personal injury or death.

⚡ CAUTION
USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED FOR ALUMINUM CONNECTIONS.
Failure to do so may cause damage to the equipment.

FCC LABEL - SEE NOTE

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Dimensional Data

Figure 2. Dimensional drawing

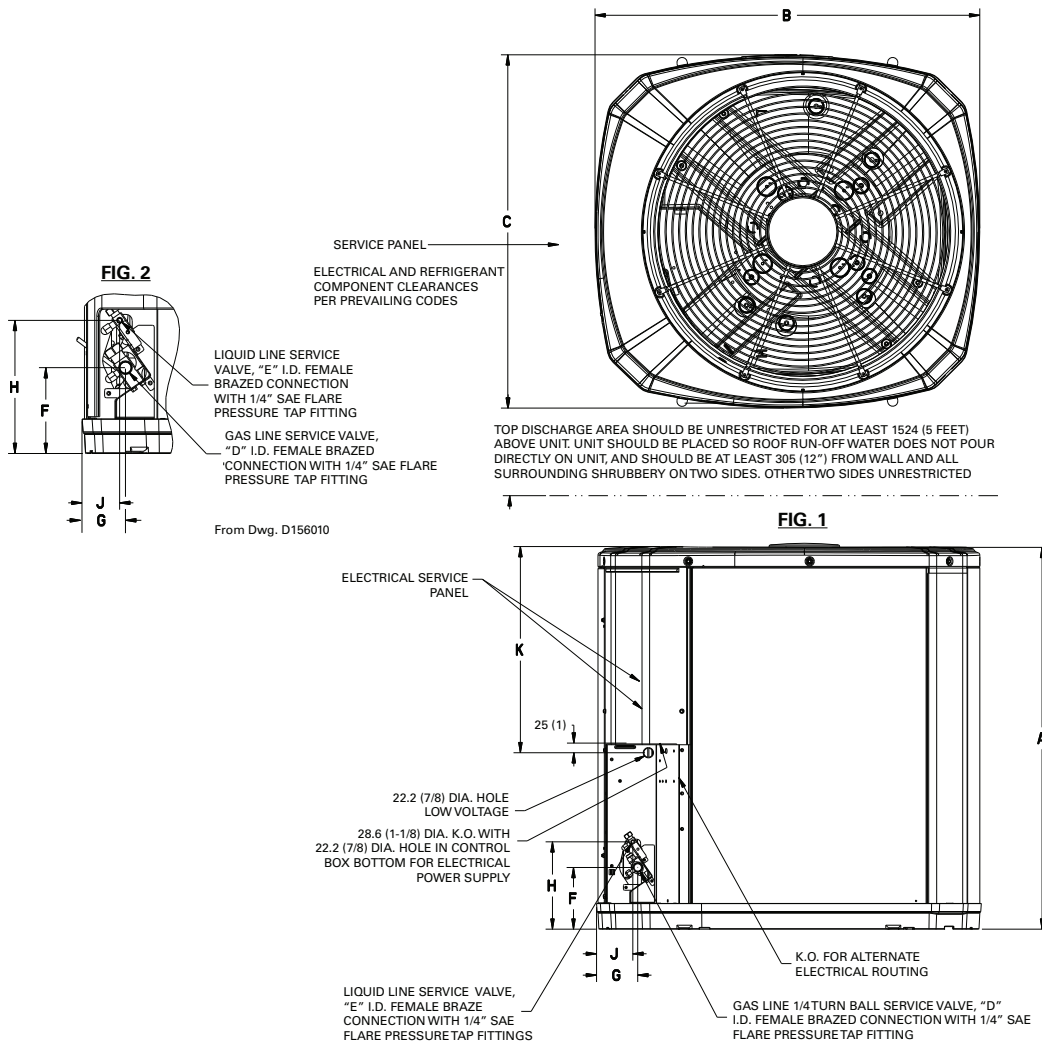
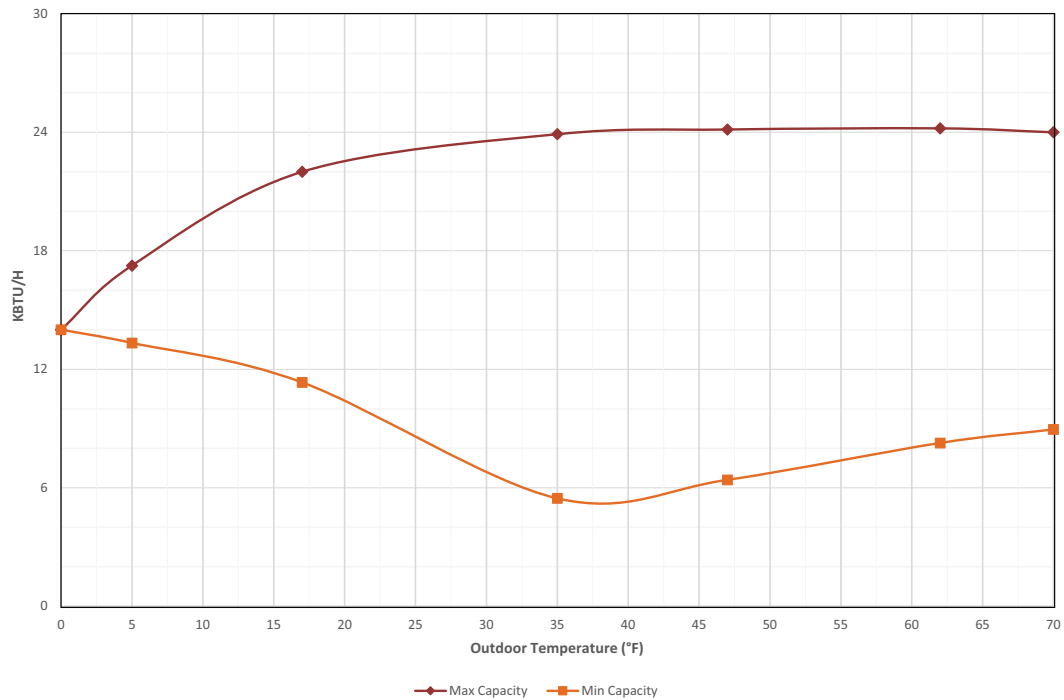


Table 5. Dimensions (inch)

Model	Base	A	B	C	D	E	F	G	H	J	K
5TWV8X24A	3	1035 (40-3/4)	829 (32-5/8)	756 (29-3/4)	13-1/2	8-5/16	127 (5)	76 (3)	197 (7-3/4)	57 (2-1/4)	813 (32)
5TWV8X36A	3	1035 (40-3/4)	829 (32-5/8)	756 (29-3/4)	16-5/8	8-5/16	127 (5)	76 (3)	197 (7-3/4)	57 (2-1/4)	813 (32)
5TWV8X48A	4	1045 (41-1/8)	946 (37-1/4)	870 (34-1/4)	19-3/4	8-5/16	127 (5)	76 (3)	197 (7-3/4)	57 (2-1/4)	813 (32)
5TWV8X60A	4	1147 (45-1/8)	946 (37-1/4)	870 (34-1/4)	19-3/4	8-5/16	127 (5)	76 (3)	197 (7-3/4)	57 (2-1/4)	813 (32)

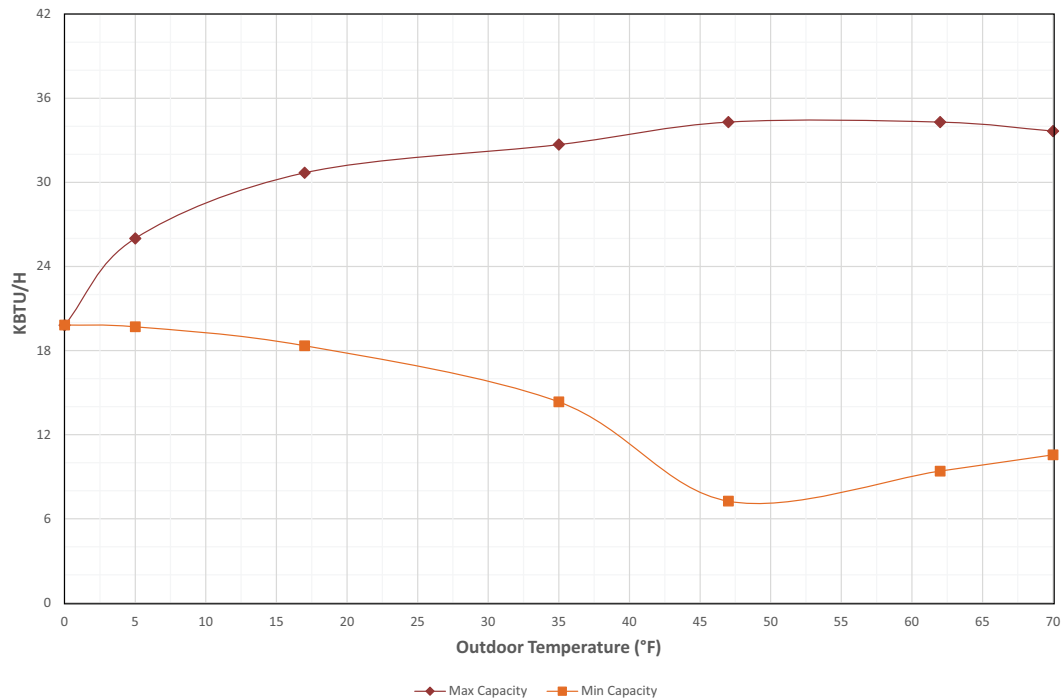
Balance Point Heat Capacity Worksheets

Figure 3. 2-ton heating capacity – model 5TWV8X24A1



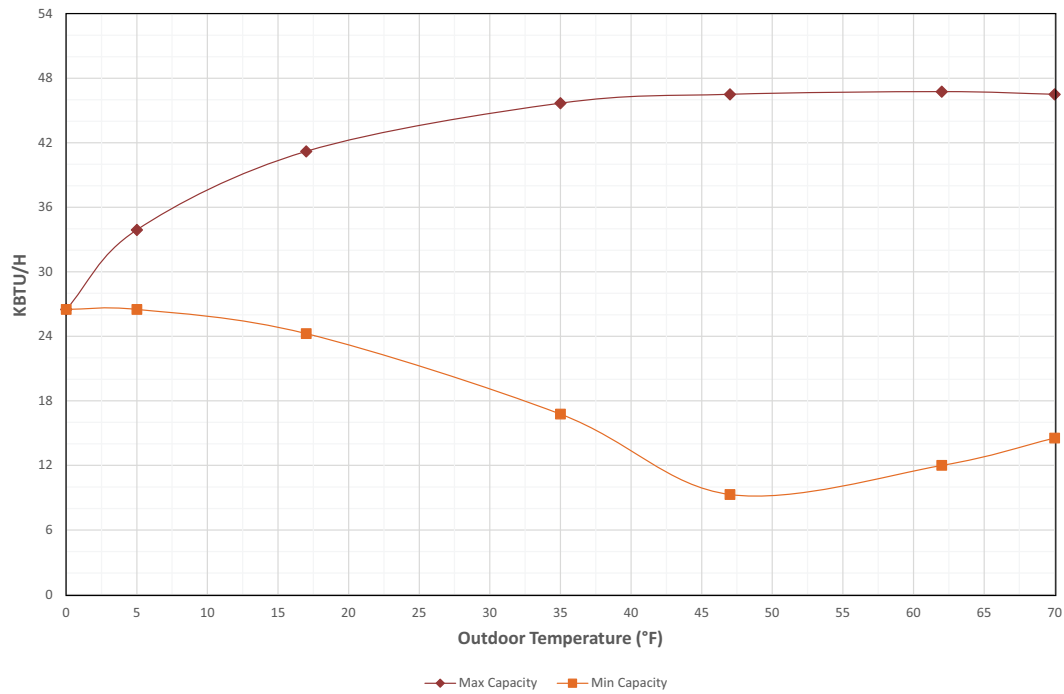
Note: Based on 70°F indoor return air.

Figure 4. 3-ton heating capacity – model 5TWV8X36A1



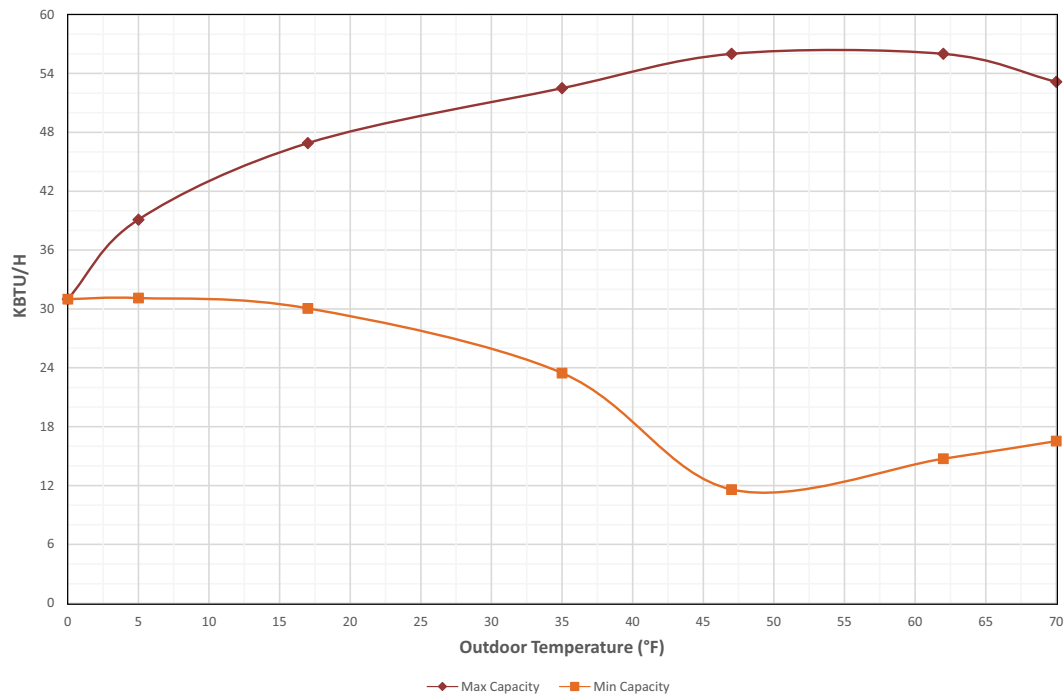
Note: Based on 70°F indoor return air.

Figure 5. 4-ton heating capacity – model 5TWW8X48A1



Note: Based on 70°F indoor return air.

Figure 6. 5-ton heating capacity – model 5TWW8X60A1



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 Heat Pumps

This outdoor unit contains the Trane Link Heat Pumps 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.

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.

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.



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