



# Product Data

## Split System Heat Pump

### 208-230V MODEL

4TWA4036A3000A

4TWA4042A3000A

4TWA4048A3000A

4TWA4060A3000A

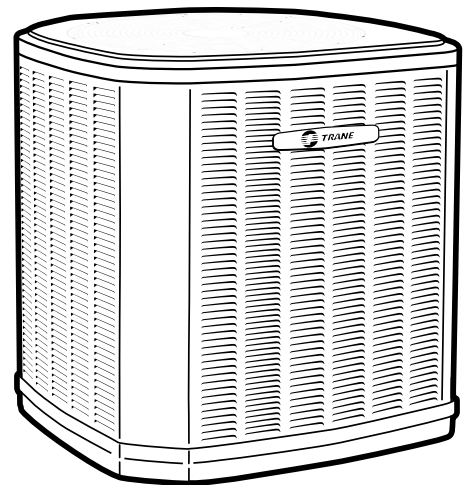
### 460V MODEL

4TWA4036A4000A

4TWA4042A4000A

4TWA4048A4000A

4TWA4060A4000A



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



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# Product Specifications

**Table 1. 230v Models**

|  |                    |                    |                    |                   |
|--|--------------------|--------------------|--------------------|-------------------|
| <b>OUTDOOR UNIT</b> <sup>(a)</sup>                     | 4TWA4036A3000A     | 4TWA4042A3000A     | 4TWA4048A3000A     | 4TWA4060A3000A    |
| POWER CONNS. – V/PH/Hz <sup>(b)</sup>                  | 208–230/3/60       | 208–230/3/60       | 208–230/3/60       | 208–230/3/60      |
| MIN. BRCH. CIR. AMPACITY                               | 13                 | 18                 | 18                 | 21                |
| BR. CIR. PROT. RTG. – MAX. (AMPS)                      | 20                 | 30                 | 30                 | 35                |
| <b>COMPRESSOR</b>                                      | CLIMATUFF®- SCROLL | CLIMATUFF®- SCROLL | CLIMATUFF®-SCROLL  | CLIMATUFF®-SCROLL |
| R.L. AMPS – L.R. AMPS                                  | 9.9 – 70           | 13.5 – 88          | 13.7 – 83.1        | 15.9 – 110        |
| <b>OUTDOOR FAN</b>                                     | PROPELLER          | PROPELLER          | PROPELLER          | PROPELLER         |
| DIA. (IN.) – NO. USED                                  | 27.6 – 1           | 27.6 – 1           | 27.6 – 1           | 27.6 – 1          |
| NO. MOTORS – HP  | 1 – 1/8            | 1 – 1/5            | 1 – 1/5            | 1 – 1/5           |
| F.L. AMPS  | 0.8                | 1.1                | 1.1                | 1.1               |
| <b>OUTDOOR COIL – TYPE</b>                             | SPINE FIN™         | SPINE FIN™         | SPINE FIN™         | SPINE FIN™        |
| <b>REFRIGERANT</b>                                     |                    |                    |                    |                   |
| LBS. – R-410A (O.D. UNIT)                              | 6 LBS., 12 OZ      | 6 LBS., 5 OZ       | 9 LBS., 0 OZ       | 10 LBS., 14 OZ    |
| LINE SIZE – IN. O.D. GAS <sup>(c)</sup> <sup>(d)</sup> | 7/8                | 7/8                | 7/8                | 1–1/8             |
| LINE SIZE – IN. O.D. LIQ.                              | 3/8                | 3/8                | 3/8                | 3/8               |
| <b>CHARGING SPECIFICATIONS</b>                         |                    |                    |                    |                   |
| SUBCOOLING   | 10°F               | 10°F               | 10°F               | 8°F               |
| <b>DIMENSIONS</b>                                      | H X W X D          | H X W X D          | H X W X D          | H X W X D         |
| CRATED (IN.)   | 34.4 x 38.7 x 35.1 | 34.4 x 38.7 x 35.1 | 38.4 x 38.7 x 35.1 | 51 x 38.7 x 35.1  |
| <b>WEIGHT</b>  |                    |                    |                    |                   |
| SHIPPING (LBS.)  | 240                | 240                | 252                | 325               |
| NET (LBS.)   | 208                | 208                | 218                | 275               |
| <b>Optional Accessories:</b>                           |                    |                    |                    |                   |
| Anti-short Cycle Timer                                 | TAYASCT501A        | TAYASCT501A        | TAYASCT501A        | TAYASCT501A       |
| Evaporator Defrost Control                             | AY28X084           | AY28X084           | AY28X084           | AY28X084          |
| Rubber Isolator Kit                                    | BAYISLT101         | BAYISLT101         | BAYISLT101         | BAYISLT101        |
| Extreme Condition Mount Kit                            | BAYECMT004         | BAYECMT004         | BAYECMT004         | BAYECMT004        |
| Seacoast Kit   | BAYSEAC001         | BAYSEAC001         | BAYSEAC001         | BAYSEAC001        |
| Low Ambient Kit  | BAYLOAM107         | BAYLOAM107         | BAYLOAM107         | BAYLOAM107        |
| Sound Enclosure  | BAYSDEN004         | BAYSDEN004         | BAYSDEN004         | BAYSDEN004        |
| Service Valve Panel Cover                              | TAYSVPANL3343AA    | TAYSVPANL3343AA    | TAYSVPANL0046AA    | TAYSVPANL0032AA   |
| Refrigerant Lineset <sup>(e)</sup>                     |                    |                    |                    |                   |

<sup>(a)</sup> Certified in accordance with the Air-Source Unitary Air-conditioner Equipment certification program, which is based on AHRI standard 210/240.

<sup>(b)</sup> Calculated in accordance with N.E.C. Only use HACR circuit breakers or fuses.

<sup>(c)</sup> 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 application guide SS-APG006–xx for long line sets or specialty applications (xx denotes latest revision).

<sup>(d)</sup> The outdoor condensing units are factory charged with the system charge required for the outdoor condensing unit, ten (10) feet of tested connecting line, and the smallest rated indoor evaporative coil match. Always verify proper system charge via subcooling (TXV/EEV) or superheat (fixed orifice) per the unit nameplate.

<sup>(e)</sup> 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.



## Product Specifications

**Table 2. 460v Models**

|  |                    |                    |                    |                   |
|--|--------------------|--------------------|--------------------|-------------------|
| <b>OUTDOOR UNIT</b> <sup>(a)</sup>                     | 4TWA4036A4000A     | 4TWA4042A4000A     | 4TWA4048A4000A     | 4TWA4060A4000A    |
| POWER CONNS. – V/PH/HZ <sup>(b)</sup>                  | 460/3/60           | 460/3/60           | 460/3/60           | 460/3/60          |
| MIN. BRCH. CIR. AMPACITY                               | 6                  | 8                  | 8                  | 9                 |
| BR. CIR. PROT. RTG. – MAX. (AMPS)                      | 15                 | 15                 | 15                 | 15                |
| <b>COMPRESSOR</b>                                      | CLIMATUFF®- SCROLL | CLIMATUFF®- SCROLL | CLIMATUFF®-SCROLL  | CLIMATUFF®-SCROLL |
| R.L. AMPS – L.R. AMPS                                  | 4.3 – 31           | 6 – 44             | 6.2 – 41           | 7.1 – 52          |
| <b>OUTDOOR FAN</b>                                     | PROPELLER          | PROPELLER          | PROPELLER          | PROPELLER         |
| DIA. (IN.) – NO. USED                                  | 27.6 – 1           | 27.6 – 1           | 27.6 – 1           | 27.6 – 1          |
| NO. MOTORS – HP  | 1 – 1/8            | 1 – 1/5            | 1 – 1/5            | 1 – 1/5           |
| F.L. AMPS  | 0.4                | 0.6                | 0.6                | 0.6               |
| <b>OUTDOOR COIL – TYPE</b>                             | SPINE FIN™         | SPINE FIN™         | SPINE FIN™         | SPINE FIN™        |
| <b>REFRIGERANT</b>                                     |                    |                    |                    |                   |
| LBS. – R-410A (O.D. UNIT)                              | 6 LBS., 12 OZ      | 6 LBS., 5 OZ       | 9 LBS., 0 OZ       | 10 LBS., 14 OZ    |
| LINE SIZE – IN. O.D. GAS <sup>(c)</sup> <sup>(d)</sup> | 7/8                | 7/8                | 7/8                | 1 – 1/8           |
| LINE SIZE – IN. O.D. LIQ.                              | 3/8                | 3/8                | 3/8                | 3/8               |
| <b>CHARGING SPECIFICATIONS</b>                         |                    |                    |                    |                   |
| SUBCOOLING   | 10°F               | 10°F               | 10°F               | 8°F               |
| <b>DIMENSIONS</b>                                      | H X W X D          | H X W X D          | H X W X D          | H X W X D         |
| CRATED (IN.)   | 34.4 x 38.7 x 35.1 | 34.4 x 38.7 x 35.1 | 38.4 x 38.7 x 35.1 | 51 x 38.7 x 35.1  |
| <b>WEIGHT</b>  |                    |                    |                    |                   |
| SHIPPING (LBS.)  | 240                | 240                | 252                | 324               |
| NET (LBS.)   | 208                | 208                | 218                | 274               |
| <b>Optional Accessories:</b>                           |                    |                    |                    |                   |
| Anti-short Cycle Timer                                 | TAYASCT501A        | TAYASCT501A        | TAYASCT501A        | TAYASCT501A       |
| Evaporator Defrost Control                             | AY28X084           | AY28X084           | AY28X084           | AY28X084          |
| Rubber Isolator Kit                                    | BAYISLT101         | BAYISLT101         | BAYISLT101         | BAYISLT101        |
| Extreme Condition Mount Kit                            | BAYECMT004         | BAYECMT004         | BAYECMT004         | BAYECMT004        |
| Seacoast Kit   | BAYSEAC001         | BAYSEAC001         | BAYSEAC001         | BAYSEAC001        |
| Low Ambient Kit  | BAYLOAM107         | BAYLOAM107         | BAYLOAM107         | BAYLOAM107        |
| Sound Enclosure  | BAYSDEN004         | BAYSDEN004         | BAYSDEN004         | BAYSDEN004        |
| Service Valve Panel Cover                              | TAYSVPANL3343AA    | TAYSVPANL3343AA    | TAYSVPANL0046AA    | TAYSVPANL0032AA   |
| Refrigerant Lineset <sup>(e)</sup>                     |                    |                    |                    |                   |

<sup>(a)</sup> Certified in accordance with the Air-Source Unitary Air-conditioner Equipment certification program, which is based on AHRI standard 210/240.

<sup>(b)</sup> Calculated in accordance with N.E.C. Only use HACR circuit breakers or fuses.

<sup>(c)</sup> 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 application guide SS-APG006–xx for long line sets or specialty applications (xx denotes latest revision).

<sup>(d)</sup> The outdoor condensing units are factory charged with the system charge required for the outdoor condensing unit, ten (10) feet of tested connecting line, and the smallest rated indoor evaporative coil match. Always verify proper system charge via subcooling (TXV/EEV) or superheat (fixed orifice) per the unit nameplate.

<sup>(e)</sup> 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 Power Level

| Sound Power Level  |                                      |                             |        |        |        |         |         |         |         |
|--|--------------------------------------|-----------------------------|--------|--------|--------|---------|---------|---------|---------|
| MODEL  | 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 |
| 4TWA4036A3   | 75                                   | 72                          | 72     | 71     | 69     | 70      | 62      | 57      | 52      |
| 4TWA4042A3   | 74                                   | 85                          | 74     | 68     | 69     | 69      | 63      | 58      | 54      |
| 4TWA4048A3   | 74                                   | 85                          | 74     | 68     | 69     | 69      | 63      | 58      | 54      |
| 4TWA4060A3   | 74                                   | 85                          | 74     | 68     | 69     | 69      | 63      | 58      | 54      |
| Note: Rated in accordance with AHRI Standard 270-2008 *For reference only. |                                      |                             |        |        |        |         |         |         |         |
| 4TWA4036A4   | 75                                   | 72                          | 72     | 71     | 69     | 70      | 62      | 57      | 52      |
| 4TWA4042A4   | 74                                   | 85                          | 74     | 68     | 69     | 69      | 63      | 58      | 54      |
| 4TWA4048A4   | 74                                   | 85                          | 74     | 68     | 69     | 69      | 63      | 58      | 54      |
| 4TWA4060A4   | 74                                   | 85                          | 74     | 68     | 69     | 69      | 63      | 58      | 54      |



# Accessory Description and Usage

**Anti-Short Cycle Timer** — Solid state timing device that prevents compressor recycling until five (5) minutes have elapsed after satisfying call or power interruptions. Use in area with questionable power delivery, commercial applications, long lineset, etc.

**Evaporation Defrost Control** — SPST Temperature actuated switch that cycles the condenser off as indoor coil reaches freeze-up conditions. Used for low ambient cooling to 30°F with TXV.

**Rubber Isolators** — Five (5) large rubber donuts to isolate condensing unit from transmitting energy into mounting frame or pad. Use on any application where sound transmission needs to be minimized.

**Extreme Condition Mount Kit** — Bracket kits to securely mount condensing unit to a frame or pad without removing any panels. Use in areas with high winds, or on commercial roof tops, etc.

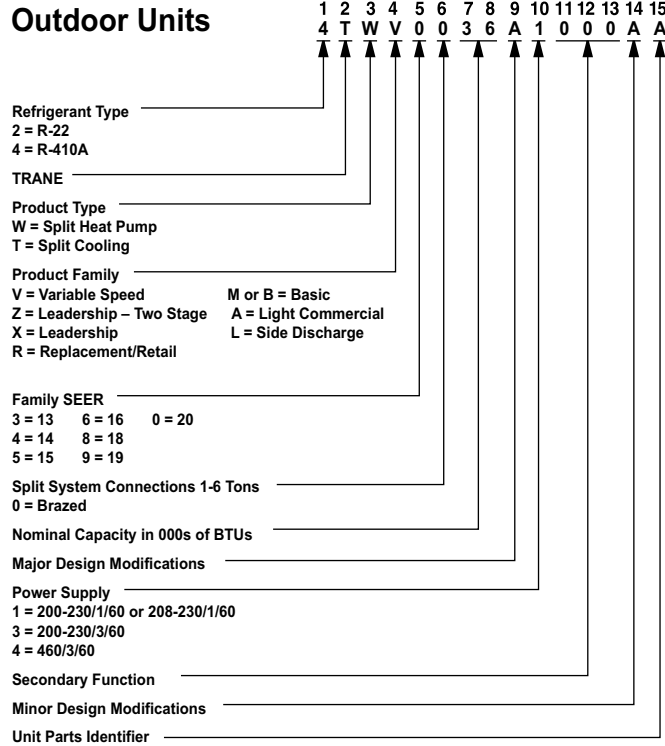
## AHRI Standard Capacity Rating Conditions

AHRI Standard 210/240 Rating Conditions

1. Cooling 80°F DB, 67°F WB air entering indoor coil, 95°F DB air entering outdoor coil.
2. High Temperature Heating 47°F DB, 43°F WB air entering outdoor coil, 70°F DB air entering indoor coil.
3. Low Temperature Heating 17°F DB air entering outdoor coil.
4. Rated indoor airflow for heating is the same as for cooling.

**AHRI Standard 270 Rating Conditions** — (Noise rating numbers are determined with the unit in cooling operations.) Standard Noise Rating number is at 95°F outdoor air.

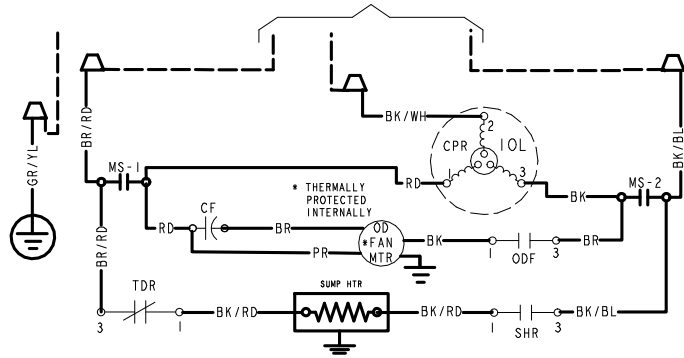
# Model Nomenclature



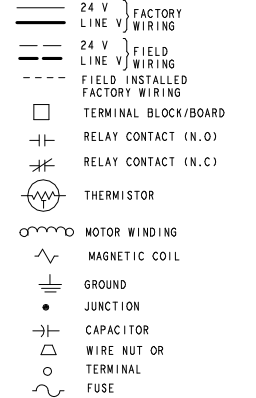
# Schematic

**Figure 1. 3.5, 4.0 & 5.0 Ton 460V Models**

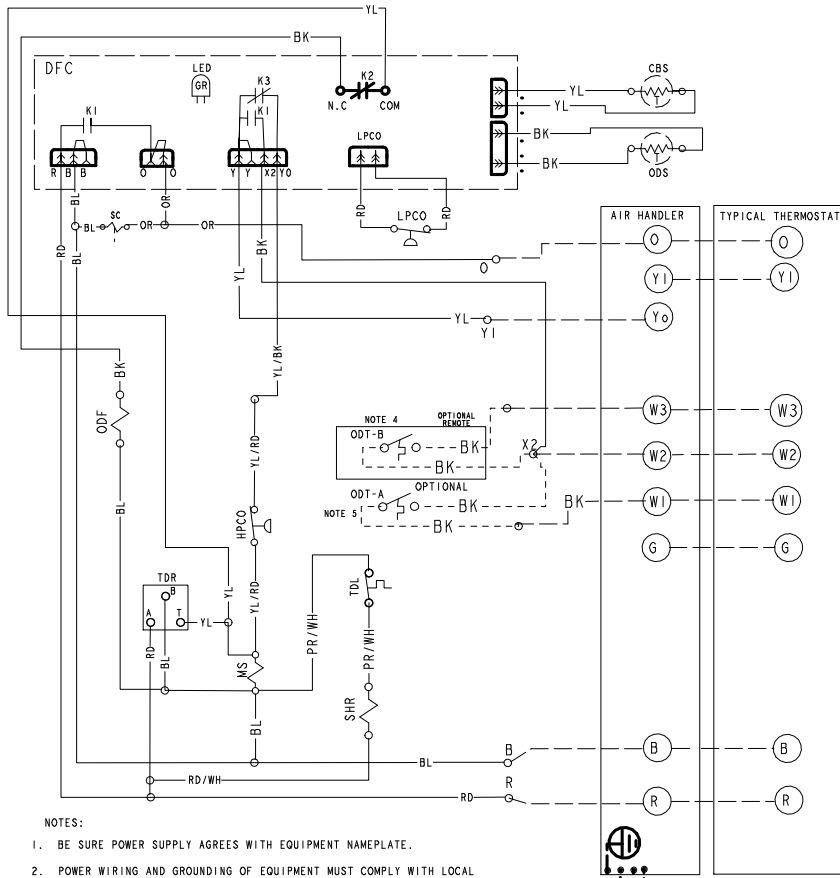
TO POWER SUPPLY PER UNIT NAMEPLATE AND LOCAL CODES



## LEGEND



- ACR A/C RECTIFIER
- CBS COIL BOTTOM SENSOR
- CF FAN CAPACITOR
- CN WIRE CONNECTOR
- CPR COMPRESSOR
- CR RUN CAPACITOR
- CS STARTING CAPACITOR
- CSR CAPACITOR SWITCHING RELAY
- DFC DEFROST CONTROL
- EEV ELECTRONIC EXP VALVE
- EEVC ELECTRONIC EXP VALVE CONTROL
- F INDOOR FAN RELAY
- HPCO HIGH PRESSURE CUTOFF SWITCH
- IOL INTERNAL OVERLOAD PROTECTOR
- LPCO LOW PRESSURE CUTOFF SWITCH
- MS COMPRESSOR MOTOR CONTACTOR
- ODA OUTDOOR ANTICIPATOR
- ODF OUTDOOR FAN RELAY
- ODT OUTDOOR THERMOSTAT
- ODS OUTDOOR TEMPERATURE SENSOR
- ODT OUTDOOR THERMOSTAT
- P-TRD PRESSURE TRANSDUCER
- SC SWITCH OVER VALVE SOLENOID
- SHR SUMP HEATER RELAY
- SM SYSTEM ON-OFF SWITCH
- TDL DISCHARGE LINE THERMOSTAT
- TDR TIME DELAY RELAY (5 SEC DELAY ON)
- TNS TRANSFORMER
- TEMP SENSOR, TEMPERATURE
- Y2C HIGH CAPACITY CONTROL RELAY



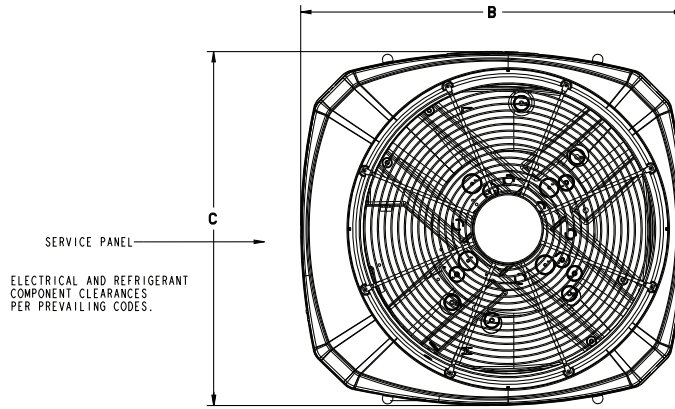
- NOTES:
1. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT NAMEPLATE.
  2. POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
  3. LOW VOLTAGE WIRING TO BE NO. 18 AWG MINIMUM CONDUCTOR.
  4. ODT-B MUST BE SET LOWER THAN ODT-A, IF ODT-B IS NOT USED, ADD JUMPER BETWEEN W2 AND W3 AT AIR HANDLER, IF USED, ODT-B MUST BE MOUNTED REMOTE OF CONTROL BOX IN AN APPROVED WEATHERPROOF ENCLOSURE
  5. IF ODT-A IS NOT USED, ADD JUMPER BETWEEN W1 AND W2 AT AIR HANDLER

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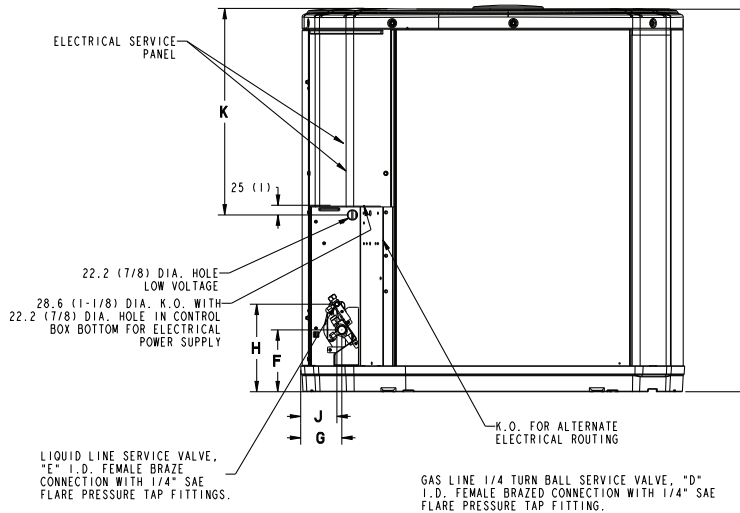
TO POWER SUPPLY  
PER LOCAL CODES



# Outline Drawing



TOP DISCHARGE AREA SHOULD BE UNRESTRICTED FOR AT LEAST 1524 (5 FEET) ABOVE UNIT. UNIT SHOULD BE PLACED SO ROOF RUN-OFF WATER DOES NOT POUR DIRECTLY ON UNIT, AND SHOULD BE AT LEAST 305 (12") FROM WALL AND ALL SURROUNDING SHRUBBERY ON TWO SIDES. OTHER TWO SIDES UNRESTRICTED.



| Model      | Base | A                | B               | C               | D   | E   | F              | G             | H              | J             | K           |
|------------|------|------------------|-----------------|-----------------|-----|-----|----------------|---------------|----------------|---------------|-------------|
| 4TWA4036A3 | 4    | 741<br>(29-1/8)  | 946<br>(37-1/4) | 870<br>(34-1/4) | 3/4 | 3/8 | 143<br>(5-5/8) | 83<br>(3-1/4) | 206<br>(8-1/8) | 70<br>(2-3/4) | 508<br>(20) |
| 4TWA4042A3 | 4    | 741<br>(29-1/8)  | 946<br>(37-1/4) | 870<br>(34-1/4) | 3/4 | 3/8 | 143<br>(5-5/8) | 83<br>(3-1/4) | 206<br>(8-1/8) | 70<br>(2-3/4) | 508<br>(20) |
| 4TWA4048A3 | 4    | 841<br>(33-1/8)  | 946<br>(37-1/4) | 870<br>(34-1/4) | 3/4 | 3/8 | 156<br>(6)     | 98<br>(3-7/8) | 219<br>(8-5/8) | 86<br>(3-3/8) | 508<br>(20) |
| 4TWA4060A3 | 4    | 1147<br>(45-1/8) | 946<br>(37-1/4) | 870<br>(34-1/4) | 7/8 | 3/8 | 152<br>(6)     | 98<br>(3-7/8) | 219<br>(8-5/8) | 86<br>(3-3/8) | 813<br>(32) |
| 4TWA4036A4 | 4    | 741<br>(29-1/8)  | 946<br>(37-1/4) | 870<br>(34-1/4) | 7/8 | 3/8 | 143<br>(5-5/8) | 83<br>(3-1/4) | 206<br>(8-1/8) | 70<br>(2-3/4) | 508<br>(20) |
| 4TWA4042A4 | 4    | 741<br>(29-1/8)  | 946<br>(37-1/4) | 870<br>(34-1/4) | 3/4 | 3/8 | 143<br>(5-5/8) | 83<br>(3-1/4) | 206<br>(8-1/8) | 70<br>(2-3/4) | 508<br>(20) |
| 4TWA4048A4 | 4    | 841<br>(33-1/8)  | 946<br>(37-1/4) | 870<br>(34-1/4) | 3/4 | 3/8 | 156<br>(6)     | 98<br>(3-7/8) | 219<br>(8-5/8) | 86<br>(3-3/8) | 508<br>(20) |
| 4TWA4060A4 | 4    | 1147<br>(45-1/8) | 946<br>(37-1/4) | 870<br>(34-1/4) | 7/8 | 3/8 | 152<br>(6)     | 98<br>(3-7/8) | 219<br>(8-5/8) | 86<br>(3-3/8) | 813<br>(32) |





# Mechanical Specification Options

## General

The outdoor condensing units are factory charged with the system charge required for the outdoor condensing unit, ten (10) feet of tested connecting line, and the smallest rated indoor evaporative coil match. This unit is designed to operate at outdoor ambient temperatures as high as 115°F. Cooling capacities are matched with a wide selection of air handlers and furnace coils that are AHRI certified. The unit is certified to UL 1995. Exterior is designed for outdoor application.

## Casing

Unit casing is constructed of heavy gauge, galvanized steel and painted with a weather-resistant powder paint finish. The corner panels are prepainted. All panels are subjected to our 1,000 hour salt spray test.

## Refrigerant Controls

Refrigeration system controls include condenser fan, compressor contactor and low and high pressure switches. A factory supplied, field installed liquid line drier is standard.

## Compressor

The compressor features internal over temperature and pressure protection. Other features include: Centrifugal oil pump and low vibration and noise.

## Condenser Coil

The 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 a cooling capacity to 55°F. The addition of an evaporator defrost control permits operation to 40°F. The addition of an evaporator defrost control with TXV permits low ambient cooling to 30°F.

The addition of the BAYLOAM107A low ambient kit permits ambient cooling to 20°F.

**Thermostats**—Cooling only and heat/cooling (manual and automatic change over). Sub-base to match thermostat and locking thermostat cover.







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