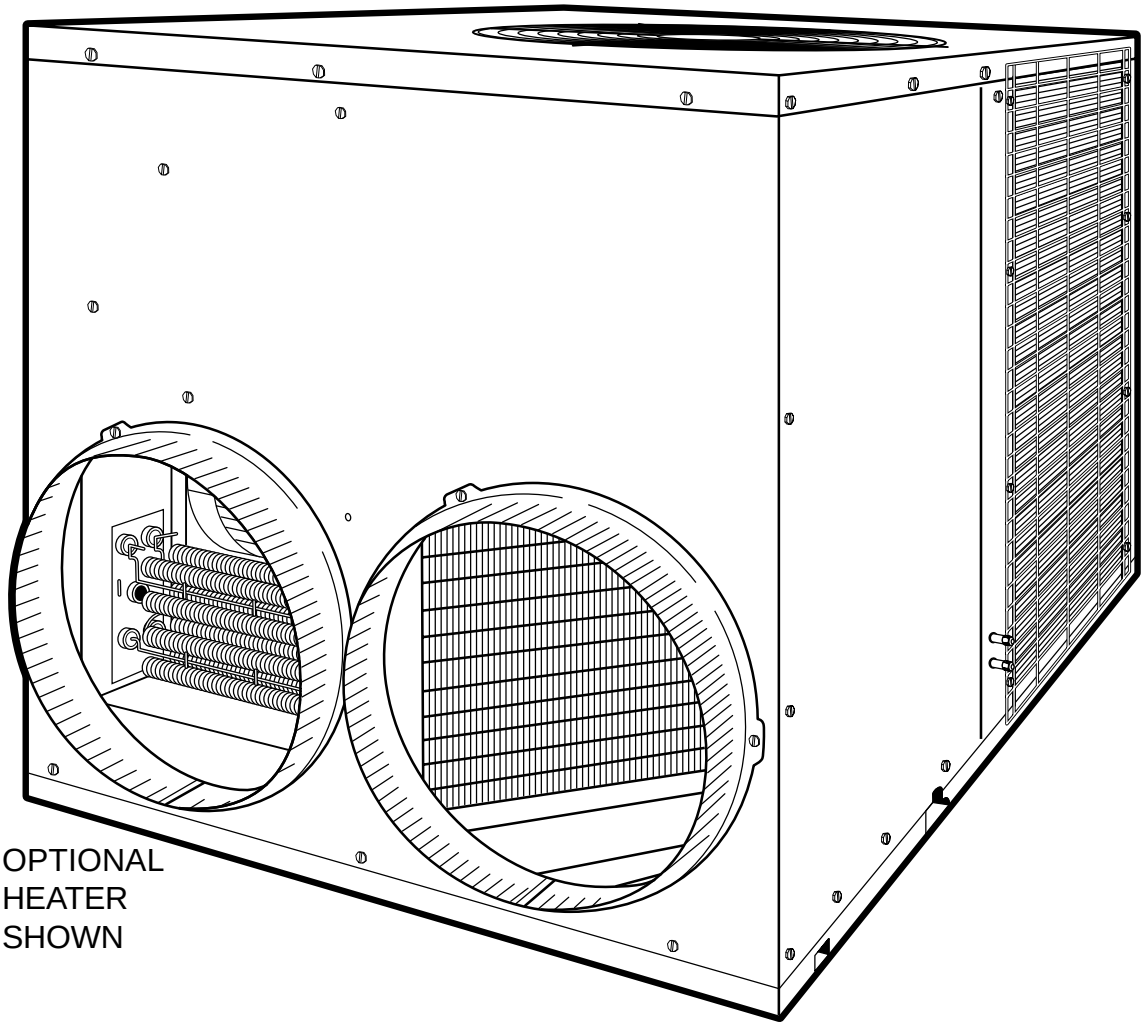
# 13 SEER
# PACKAGED COOLING
# HORIZONTAL MODELS



OPTIONAL
HEATER
SHOWN

## MODELS TCK024,030,036,042B1
## 2, 2½, 3, 3½ TON



**PUB NO 22-1716-04**
Oct 2006

# Features and Benefits

# *It's Hard To Stop A Trane.®*

## Horizontal Packaged Cooling Units

Whether your requirement is residential or light commercial, our new line of packaged air conditioners gives you the excellent performance and reliability that you expect from Trane. Our new cooling with electric heat packaged units offer you "the best value" with the most efficient and versatile models in the industry.

The efficiencies of our new units meet or exceed virtually all local standards and are among the most competitive in the industry. We have also made installation easier and less costly by standardizing the cabinets and accessories.

## Introducing the new TRANE® horizontal packaged cooling unit, the simplest, most efficient, and reliable unit we've ever made.

**Better Installability**

These packaged cooling units have a horizontal configuration which provides an efficient airflow delivery. This edicated design eliminates the need for any unit conversion, saving field labor that has a great bearing on installation cost.

The new models have a standardized cabinet that allows common use of accessories for simplified installation and alleviates the burden of whether the right accessories are being applied.

**Better Serviceability**

Accessibility, already a standard feature in Trane packaged cooling units, has been greatly enhanced. With a standardized cabinet, all components were designed to be in the same location, regardless of unit size. Our timesaving rotolock compressor fittings provide easy removal if service on the compressor is required.

A redesigned and simplified control panel that features colored and numbered wire is standard on all products. This aids in reducing troubleshooting time when wire tracing is required. And easy access to all major components can be accomplished by removing quick service access panels.

**Better Performance**

Our packaged cooling units offer cooling efficiencies that are unmatched in the industry and provide you with a product far superior in performance than the competition.

**Unmatched Quality and Reliability**

All major components on these products, including the compressor, have been designed and manufactured for maximum service. Every Climatuff® compressor is designed and manufactured to exacting specifications. Each design is life tested in extreme environments to ensure reliable and long lasting operation in normal applications. Each compressor has internal motor protection for added reliability.

# Features and Benefits

The TCK024-042A packaged cooling feature:

- Climatuff® compressor, designed and manufactured to provide reliable, economical operation
- Internal pressure relief and internal overload protection
- Two-speed indoor fan motor
- External pressure taps for refrigerant check
- Thermal expansion valve refrigerant control
- Demand defrost control system
- Reliable, solenoid-operated reversing valve
- Copper tube, aluminum plate fin coils
- Polarized plug for easy field connection of low voltage to supplementary heater
- Low ambient cooling to 45° F. as manufactured; to 0° F. with accessory
- Duct flanges
- UL and ARI certified
- Outdoor coil guards

**Accessories**

- Supplemental Electric Heaters
- Thermostats
- Low ambient cooling to 0° F.

# Contents



**DATA SUBJECT TO CHANGE WITHOUT NOTICE**

# Optional Equipment

**OPTIONAL EQUIPMENT FOR PACKAGE UNITS. (Check mark [✓] indicates accessories included.)**

**Indoor Thermostats**

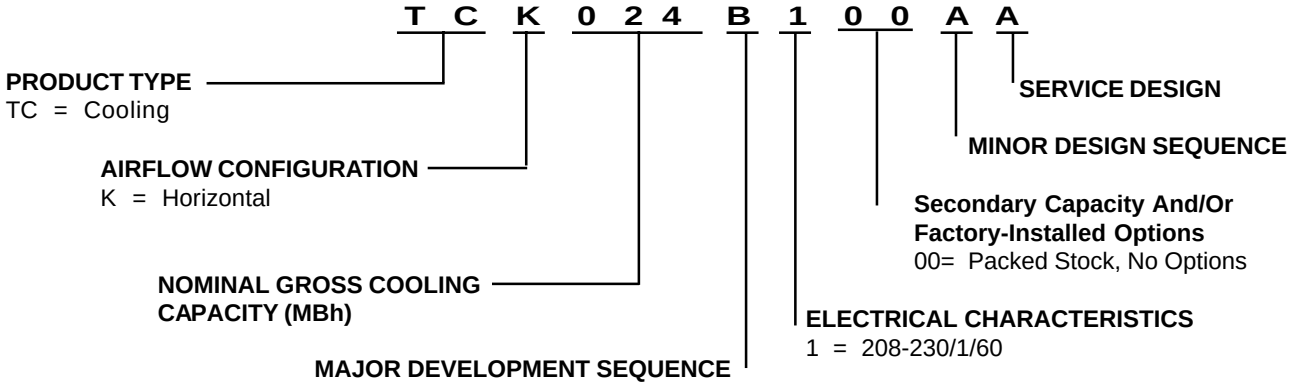
| | | |
|---|---|---|
| Prog. 7Day, 3 Htg/2 Clg, Auto/Manual | ASYSTAT500C | [ ] |
| Electronic, 3 Htg/2 Clg, (Non Programmable) | ASYSTAT575 | [ ] |
| Outdoor Temperature Sensor (use with ASYSTAT500C,575) | TAYSENS200A | [ ] |
| Prog. 5/2 Day, 2 Htg/1 Clg | ASYSTAT540 | [ ] |
| Electronic, 2 Htg/1 Clg (Non Programmable) | ASYSTAT570 | [ ] |
| Deluxe Auto Changeover,. 2 Htg/1 Clg | ASYSTAT650 | [ ] |
| Manual 2 Htg/1 Clg | ASYSTAT655A | [ ] |
| Auto/Manual, 3 Htg/2 Clg(w econ) | ASYSTAT653A | [ ] |
| Outdoor Thermostat | BAYSTAT033A | [ ] |
| Locking Thermostat Cover (Non-Programmable Thermostats) | BAY28X190 | [ ] |
| Humidistat | BAYSTAT253 | [ ] |
| Evaporator Defrost Control (Low Ambient Cooling) Kit | BAYLOAM011A | [ ] |
| Anti-short Cycle Timer① | BAYASCT001 | [ ] |
| Outdoor Thermostat Kit | BAYSTAT033A | [ ] |

**Supplementary Heaters (Single Phase)**

| | | |
|---|---|---|
| 3.74/4.98 KW Heater TCK024-036B1 (208/240v) | BAYHTRK105A | [ ] |
| 7.48/9.96 KW Heater TCK024-042B1 (208/240v) | BAYHTRK110A | [ ] |
| 11.22/14.94 KW Heater TCK036-042B1 (208/240V) | BAYHTRK116A | [ ] |

NOTES:
① *Do not use with programmable thermostats.*
② *This model has a fuse box factory provided.*

# Model Number Description



# General Data

| MODEL | TCK024B100A | TCK030B100A | TCK036B100A | TCK042B100A |
|---|---|---|---|---|
| **RATED Volts/Ph/Hz** | **208-230/1/60** | **208-230/1/60** | **208-230/1/60** | **208-230/1/60** |
| **RATINGS (COOLING)** ① | 26000 | 30600 | 36000 | 41000 |
| Indoor Airflow (CFM) | 800 | 1000 | 1200 | 1400 |
| Power Input (KW) | 2.26 | 2.46 | 3.04 | 3.52 |
| EER/SEER (BTU/Watt-Hr) ⑥ | 11.50 / 13.00 | 12.60 / 13.00 | 11.80 / 13.00 | 11.45 / 13.00 |
| Noise Rating No. ② | 75 | 75 | 75 | 77 |
| **POWER CONN.—V/Ph/Hz** | | | | |
| Min. Brch. Cir. Ampacity ③ | 14 | 20 | 23 | 28 |
| Fuse Size—Max. (amps) | 20 | 30 | 35 | 40 |
| Fuse Size—Recmd. (Amps) | 20 | 30 | 35 | 40 |
| **COMPRESSOR** | | | | |
| No. Used—No. Speeds | 1 - 1 | 1 - 1 | 1 - 1 | 1 - 1 |
| Volts/Ph/Hz | 208-230/1/60 | 208-230/1/60 | 208-230/1/60 | 208-230/1/60 |
| R.L. Amps—L.R. Amps | 8.9 - 62 | 12.2 - 67.0 | 14.7 - 83 | 16.5 - 95 |
| **OUTDOOR COIL—TYPE** | PLATE FIN | PLATE FIN | PLATE FIN | PLATE FIN |
| Rows/F.P.I. | 2 / 22 | 2 / 22 | 2 / 22 | 2 / 22 |
| Face Area (sq.ft.) | 12.20 | 11.20 | 12.30 | 12.30 |
| Tube Size (in.) | .375 | .375 | .375 | .375 |
| **INDOOR COIL—TYPE** | PLATE FIN | PLATE FIN | PLATE FIN | PLATE FIN |
| Rows/F.P.I. | 4 / 16 | 4 / 16 | 4 / 16 | 4/16 |
| Face Area (sq.ft.) | 3.90 | 3.90 | 3.90 | 3.90 |
| Tube Size (in.) | .375 | .375 | .375 | .375 |
| Refrigerant Control | TXV-NB | TXV-NB | TXV-NB | TXV-NB |
| Drain Conn. Size (in.) | 3/4 FEMALE PVC | 3/4 FEMALE PVC | 3/4 FEMALE PVC | 3/4 FEMALE PVC |
| Duct Connections | SEE OUTLINE DRAWING | SEE OUTLINE DRAWING | SEE OUTLINE DRAWING | SEE OUTLINE DRAWING |
| **OUTDOOR FAN — TYPE** | PROPELLER | PROPELLER | PROPELLER | PROPELLER |
| No. Used/Dia. (in.) | 1 / 20 | 1 / 20 | 1 / 20 | 1 / 20 |
| Type Drive/No. Speeds | DIRECT / 1 | DIRECT / 1 | DIRECT / 1 | DIRECT / 1 |
| CFM @ 0.0 in. w.g. ④ | 2500 | 2500 | 2600 | 2600 |
| No. Motors—HP | 1 - 1/5 | 1 - 1/5 | 1 - 1/5 | 1 - 1/5 |
| Motor Speed R.P.M. | 850 | 850 | 850 | 850 |
| Volts/Ph/Hz | 230/1/60 | 230/1/60 | 230/1/60 | 230/1/60 |
| F.L. Amps—L.R. Amps | 1.0 - 2.2 | 1.0 - 2.2 | 1.0 - 2.2 | 1.0 - 2.2 |
| **INDOOR FAN—TYPE** | CENTRIFUGAL | CENTRIFUGAL | CENTRIFUGAL | CENTRIFUGAL |
| Dia x Width (in.) | 9 X 9 | 10 X 9 | 10 X 9 | 10 X 9 |
| No. Used | 1 | 1 | 1 | 1 |
| Drive / Speeds (No.) | DIRECT / 2 | DIRECT / 2 | DIRECT / 2 | DIRECT / 2 |
| CFM vs. in. w.g. ⑤ | See Fan Perf. Table | See Fan Perf. Table | See Fan Perf. Table | See Fan Perf. Table |
| No. Motors—HP | 1 - .25 | 1 - .50 | 1 - .50 | 1 - .75 |
| Motor Speed R.P.M. | 1095 | 1050 | 1050 | 1050 |
| Volts/Ph/Hz | 208-230/1/60 | 208-230/1/60 | 208-230/1/60 | 208-230/1/60 |
| F.L. Amps | 1.8 - 3.7 | 4.1 | 4.1 | 6.0 |
| **FILTER / FURNISHED?** | NO | NO | NO | NO |
| Type Recommended | THROWAWAY | THROWAWAY | THROWAWAY | THROWAWAY |
| Min. Face Area ⑦ | | | | |
| Low Vel. (sq. ft.) | 2.68 | 3.33 | 4.00 | 4.67 |
| **REFRIGERANT** | | | | |
| Charge (lbs of r-22) | 6 lbs., 8 oz. | 6 lbs., 13 oz. | 7 lbs., 0 oz. | 7 lbs., 6 oz. |
| **DIMENSIONS** | H X W X D | H X W X D | H X W X D | H X W X D |
| Crated (in.) | 36 X 33.75 X 48 | 36 X 33.75 X 48 | 36 X 33.75 X 48 | 36 X 33.75 X 48 |
| Uncrated | SEE OUTLINE DRAWING | SEE OUTLINE DRAWING | SEE OUTLINE DRAWING | SEE OUTLINE DRAWING |
| **WEIGHT** | | | | |
| Shipping (lbs.) | 334 | 338 | 344 | 355 |
| Net (lbs.) | 287 | 291 | 297 | 308 |

① Rated in accordance with A.R.I. Standard 210/240.
② Calculated in accordance with A.R.I. Standard 270.
③ Calculated in accordance with currently prevailing Nat'l. Electric Code.
④ Standard Air — Dry Coil — Outdoor.
⑤ Standard Air — Wet Coil — Indoor.
⑥ Rated in accordance with D.O.E. test procedure. HSPF is at the minimum design requirement of Region IV.
⑦ Filters must be installed in return air system. Square footages listed above are based on 300 F.P.M. face velocity. If permanent filters are used size per manufacturer's recommendations with clean resistance of 0.05" W.C.

# Performance Data
# Cooling

## TCK024B AT 800 CFM (CAPACITIES ARE NET IN BTUH/1000-INDOOR FAN HEAT DEDUCTED)

| O.D. D.B. | I.D. W.B. | TOTAL CAP. | SENS. CAP. AT ENTERING D.B. TEMP. 72 | 75 | 78 | 80 | COMPR. KW |
|---|---|---|---|---|---|---|---|
| | 59 | 23.8 | 18.8 | 21.1 | 23.5 | 24.3* | 1.54 |
| 85 | 63 | 25.6 | 15.8 | 18.1 | 20.4 | 22.0 | 1.57 |
| | 67 | 27.5 | 12.4 | 14.8 | 17.1 | 18.6 | 1.59 |
| | 59 | 22.6 | 18.3 | 20.6 | 22.8* | 23.3* | 1.72 |
| 95 | 63 | 24.3 | 15.2 | 17.6 | 19.9 | 21.4 | 1.73 |
| | 67 | 26.0 | 11.9 | 14.2 | 16.5 | 18.1 | 1.75 |
| | 63 | 22.8 | 14.7 | 17.0 | 19.3 | 20.9 | 1.91 |
| 105 | 67 | 24.4 | 11.3 | 13.6 | 16.0 | 17.5 | 1.91 |
| | 71 | 26.1 | 7.9 | 10.2 | 12.5 | 14.1 | 1.92 |
| | 63 | 21.4 | 14.1 | 16.4 | 18.8 | 20.3 | 2.10 |
| 115 | 67 | 22.9 | 10.7 | 13.1 | 15.4 | 16.9 | 2.08 |
| | 71 | 24.4 | 7.3 | 9.6 | 11.9 | 13.5 | 2.06 |

CORRECTION FACTORS - OTHER AIRFLOWS (MULTIPLY OR ADD AS INDICATED)

| | AIRFLOW | TOTAL CAPACITY | SENSIBLE CAPACITY |
|---|---|---|---|
| LOW | 700 | X0.98 | X0.94 |
| HIGH | 800 | X1.00 | X1.00 |

VALUES AT ARI RATING CONDITIONS

**TOTAL NET CAPACITY = 26000 BTUH**
AIRFLOW = 800 CFM
APP. DEW PT. = 54.5 DEG. F
COMPRESSOR POWER = 1750 WATTS
I.D. FAN POWER = 290 WATTS
O.D. FAN POWER = 240 WATTS
S.E.E.R. = 13.00 BTUH/WATT
E.E.R. = 11.55 BTUH/WATT
*** DRY COIL CONDITION (TOTAL CAPACITY = SENSIBLE CAPACITY)**
**TOTAL CAPACITY, COMP. KW AND APP. DEW PT. ARE VALID ONLY FOR WET COIL**
ALL TEMPERATURES IN DEGREES F.

## TCK030B AT 1000 CFM (CAPACITIES ARE NET IN BTUH/1000-INDOOR FAN HEAT DEDUCTED)

| O.D. D.B. | I.D. W.B. | TOT CAP. | SENS CAP AT ENTERING D.B.TEMP 72z | 75 | 78 | 80 | COMPR. KW |
|---|---|---|---|---|---|---|---|
| | 59 | 27.9 | 22.8 | 25.7 | 28.2* | 28.8* | 1.74 |
| 85 | 63 | 29.9 | 19.0 | 21.9 | 24.7 | 26.6 | 1.75 |
| | 67 | 32.0 | 14.9 | 17.7 | 20.6 | 22.5 | 1.76 |
| | 59 | 26.7 | 22.3 | 25.2 | 27.2* | 27.8* | 1.97 |
| 95 | 63 | 28.6 | 18.5 | 21.4 | 24.2 | 26.1 | 1.98 |
| | 67 | 30.6 | 14.4 | 17.2 | 20.1 | 22.0 | 1.99 |
| | 63 | 27.2 | 17.9 | 20.8 | 23.7 | 25.6 | 2.28 |
| 105 | 67 | 29.1 | 13.8 | 16.7 | 19.5 | 21.4 | 2.28 |
| | 71 | 31.0 | 9.6 | 12.4 | 15.3 | 17.2 | 2.28 |
| | 63 | 25.7 | 17.4 | 20.2 | 23.1 | 25.0 | 2.58 |
| 115 | 67 | 27.5 | 13.2 | 16.1 | 18.9 | 20.8 | 2.57 |
| | 71 | 29.4 | 9.0 | 11.9 | 14.7 | 16.6 | 2.56 |

CORRECTION FACTORS - OTHER AIRFLOWS (MULTIPLY OR ADD AS INDICATED)

| | AIRFLOW | TOTAL CAP | SENS. CAP |
|---|---|---|---|
| LOW | 875 | X0.98 | X0.94 |
| HIGH | 1000 | X1.00 | X1.00 |

VALUES AT ARI RATING CONDITIONS

**TOTAL NET CAPACITY = 30600 BTUH**
AIRFLOW = 1000 CFM
APP. DEW PT. = 55.3 DEG. F
COMPRESSOR POWER = 1990 WATTS
I.D. FAN POWER = 240 WATTS
O.D. FAN POWER = 240 WATTS
S.E.E.R. = 13.00 BTUH/WATT
E.E.R. = 12.62 BTUH/WATT
*** DRY COIL CONDITION (TOTAL CAPACITY = SENSIBLE CAPACITY)**
**TOTAL CAPACITY,COMP. KW AND APP. DEW PT. ARE VALID ONLY FOR WET COIL**
ALL TEMPERATURES IN DEGREES F.

## TCK036B AT 1200 CFM (CAPACITIES ARE NET IN BTUH/1000-INDOOR FAN HEAT DEDUCTED)

| O.D. D.B. | I.D. W.B. | TOT CAP. | SENS CAP AT ENTERING D.B. TEMP 72 | 75 | 78 | 80 | COMPR. KW |
|---|---|---|---|---|---|---|---|
| | 59 | 32.8 | 26.9 | 30.3 | 33.2* | 33.9* | 2.13 |
| 85 | 63 | 35.2 | 22.4 | 25.8 | 29.2 | 31.4 | 2.16 |
| | 67 | 37.6 | 17.5 | 20.9 | 24.2 | 26.5 | 2.18 |
| | 59 | 31.5 | 26.3 | 29.7 | 32.1* | 32.8* | 2.40 |
| 95 | 63 | 33.7 | 21.8 | 25.2 | 28.6 | 30.8 | 2.42 |
| | 67 | 36.0 | 16.9 | 20.3 | 23.7 | 25.9 | 2.45 |
| | 63 | 32.1 | 21.2 | 24.6 | 27.9 | 30.2 | 2.74 |
| 105 | 67 | 34.2 | 16.2 | 19.6 | 23.0 | 25.2 | 2.77 |
| | 71 | 36.5 | 11.2 | 14.6 | 18.0 | 20.2 | 2.81 |
| | 63 | 30.4 | 20.5 | 23.9 | 27.3 | 29.5 | 3.05 |
| 115 | 67 | 32.5 | 15.6 | 19.0 | 22.3 | 24.6 | 3.09 |
| | 71 | 34.6 | 10.6 | 13.9 | 17.3 | 19.6 | 3.14 |

CORRECTION FACTORS - OTHER AIRFLOWS (MULTIPLY OR ADD AS INDICATED)

| | AIRFLOW | TOTAL CAP | SENS. CAP |
|---|---|---|---|
| LOW | 1050 | X0.98 | X0.94 |
| HIGH | 1200 | X1.00 | X1.00 |

VALUES AT ARI RATING CONDITIONS

**TOTAL NET CAPACITY = 36000 BTUH**
AIRFLOW = 1200 CFM
APP. DEW PT. = 55.4 DEG. F
COMPRESSOR POWER = 2450 WATTS
I.D. FAN POWER = 340 WATTS
O.D. FAN POWER = 250 WATTS
S.E.E.R. = 13.00 BTUH/WATT
E.E.R. = 11.89 BTUH/WATT
*** DRY COIL CONDITION (TOTAL CAPACITY = SENSIBLE CAPACITY)**
**TOTAL CAPACITY,COMP. KW AND APP. DEW PT. ARE VALID ONLY FOR WET COIL**
ALL TEMPERATURES IN DEGREES F.

## TCK042B AT 1400 CFM (CAPACITIES ARE NET IN BTUH/1000-INDOOR FAN HEAT DEDUCTED)

| O.D. D.B. | I.D. W.B. | TOT CAP. | SENS CAP AT ENTERING D.B. TEMP 72 | 75 | 78 | 80 | COMPR. KW |
|---|---|---|---|---|---|---|---|
| | 59 | 37.4 | 30.6 | 34.5 | 37.8* | 38.7* | 2.47 |
| 85 | 63 | 40.1 | 25.5 | 29.3 | 33.2 | 35.8 | 2.50 |
| | 67 | 42.8 | 19.8 | 23.7 | 27.5 | 30.1 | 2.53 |
| | 59 | 35.9 | 30.0 | 33.8 | 36.5* | 37.4* | 2.78 |
| 95 | 63 | 38.4 | 24.8 | 28.7 | 32.5 | 35.1 | 2.81 |
| | 67 | 41.0 | 19.1 | 23.0 | 26.9 | 29.4 | 2.85 |
| | 63 | 36.5 | 24.0 | 27.9 | 31.8 | 34.4 | 3.18 |
| 105 | 67 | 38.9 | 18.3 | 22.2 | 26.1 | 28.7 | 3.22 |
| | 71 | 41.5 | 12.6 | 16.4 | 20.3 | 22.9 | 3.27 |
| | 63 | 34.6 | 23.3 | 27.2 | 31.0 | 33.6 | 3.54 |
| 115 | 67 | 36.9 | 17.6 | 21.5 | 25.3 | 27.9 | 3.60 |
| | 71 | 39.2 | 11.8 | 15.7 | 19.6 | 22.1 | 3.66 |

CORRECTION FACTORS - OTHER AIRFLOWS (MULTIPLY OR ADD AS INDICATED)

| | AIRFLOW | TOTAL CAP | SENS. CAP |
|---|---|---|---|
| LOW | 1225 | X0.99 | X0.94 |
| HIGH | 1400 | X1.00 | X1.00 |

VALUES AT ARI RATING CONDITIONS

**TOTAL NET CAPACITY = 41000 BTUH**
AIRFLOW = 1400 CFM
APP. DEW PT. = 55.4 DEG. F
COMPRESSOR POWER = 2850 WATTS
I.D. FAN POWER = 450 WATTS
O.D. FAN POWER = 250 WATTS
S.E.E.R. = 13.00 BTUH/WATT
E.E.R. = 11.66 BTUH/WATT
*** DRY COIL CONDITION (TOTAL CAPACITY = SENSIBLE CAPACITY)**
**TOTAL CAPACITY,COMP. KW AND APP. DEW PT. ARE VALID ONLY FOR WET COIL**
ALL TEMPERATURES IN DEGREES F.

# Fan Performance Data

## INDOOR BLOWER

TCK024B

| MOTOR SPEED | | EXTERNAL STATIC PRESSURE ( IN. WG) | | | |
|---|---|---|---|---|---|
| | | 0.2 | 0.3 | 0.4 | 0.5 |
| ② LOW | WATTS | 294 | 276 | 249 | 225 |
| | CFM | 826 | 797 | 724 | 625 |
| HIGH | WATTS | 430 | 404 | 325 | 344 |
| | CFM | 1131 | 1081 | 1006 | 916 |

① - WET COIL, NO FILTERS

② - FACTORY SETTING

## INDOOR BLOWER

TCK, WCK030B

| MOTOR SPEED | | EXTERNAL STATIC PRESSURE ( IN. WG) | | | |
|---|---|---|---|---|---|
| | | 0.2 | 0.3 | 0.4 | 0.5 |
| ② LOW | WATTS | 178 | 190 | 197 | 209 |
| | CFM | 1015 | 994 | 930 | 893 |
| HIGH | WATTS | 224 | 226 | 239 | 249 |
| | CFM | 1100 | 1075 | 1038 | 991 |

① - WET COIL, NO FILTERS

② - FACTORY SETTING

## INDOOR BLOWER

TCK, WCK036B

| MOTOR SPEED | | EXTERNAL STATIC PRESSURE ( IN. WG) | | | |
|---|---|---|---|---|---|
| | | 0.2 | 0.3 | 0.4 | 0.5 |
| ② LOW | WATTS | 295 | 308 | 323 | 335 |
| | CFM | 1242 | 1193 | 1153 | 1108 |
| HIGH | WATTS | 335 | 355 | 370 | 385 |
| | CFM | 1314 | 1274 | 1229 | 1183 |

① - WET COIL, NO FILTERS

② - FACTORY SETTING

## INDOOR BLOWER

TCK, WCK042B

| MOTOR SPEED | | EXTERNAL STATIC PRESSURE ( IN. WG) | | | | |
|---|---|---|---|---|---|---|
| | | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 |
| ② LOW | WATTS | 412 | 433 | 450 | 456 | 473 |
| | CFM | 1451 | 1415 | 1385 | 1352 | 1330 |
| HIGH | WATTS | 559 | 589 | 614 | 578 | -- -- |
| | CFM | 1655 | 1615 | 1578 | 1505 | -- -- |

① - WET COIL, NO FILTERS

② - FACTORY SETTING

# Electric Heater Data

| TABLE 1 | | | | USING SINGLE SUPPLY CIRCUIT | | | HEATER ONLY SUPPLY CIRCUIT | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | TCK COOLING / HTG | | | | | |
| **UNIT MODEL** | **ELECTRIC HEATER MODEL** | **RATED VOLTAGE** | **HEATER KW 208/240** | **MCA (2)** | **MAX FUSE OR HACR CKT BKR SIZE** | **CANADA ONLY MAXIMU-M CKT BKR SIZE (5)** | **MCA (8)** | **MAX FUSE OR HACR CKT BKR SIZE** | **CANADA ONLY MAXIMUM CKT BKR SIZE (5)** |
| TCK024B (6) | BAYHTRK105A | 208 / 240 | 3.74 / 4.98 | 25 / 29 | 25 / 30 | 30 / 30 | 23 / 26 | 25 / 30 | 30 / 30 |
| | BAYHTRK110A | 208 / 240 | 7.48 / 9.96 | 47 / 55 | 50 / 60 | 50 / 60 | 45 / 52 | 45 / 60 | 50 / 60 |
| | BAYHTRK111A | 208 / 240 | 7.48 / 9.96 | NOT USED WITH TCK024B | | | 45 / 52 | 45 / 60 | 50 / 60 |
| TCK030B | BAYHTRK105A | 208 / 240 | 3.74 / 4.98 | 28 / 31 | 30 / 35 | 30 / 40 | 23 / 26 | 25 / 30 | 30 / 30 |
| | BAYHTRK110A | 208 / 240 | 7.48 / 9.96 | 50 / 57 | 50 / 60 | 50 / 60 | 45 / 52 | 45 / 60 | 50 / 60 |
| TCK036B | BAYHTRK105A | 208 / 240 | 3.74 / 4.98 | 28 / 31 | 30 / 35 | 30 / 40 | 23 / 26 | 25 / 30 | 30 / 30 |
| | BAYHTRK110A | 208 / 240 | 7.48 / 9.96 | 50 / 57 | 50 / 60 | 50 / 60 | 45 / 52 | 45 / 60 | 50 / 60 |
| | BAYHTRK116A | 208 / 240 | 11.22 / 14.94 | 73 / 83 | 80 / 90 | 100 / 100 | 68 / 78 | 70 / 80 | 70 / 100 |
| TCK042B | BAYHTRK105A | 208 / 240 | 3.74 / 4.98 | 30 / 34 | 30 / 35 | 30 / 40 | 23 / 26 | 25 / 30 | 30 / 30 |
| | BAYHTRK110A | 208 / 240 | 7.48 / 9.96 | 53 / 59 | 60 / 60 | 60 / 60 | 45 / 52 | 45 / 60 | 50 / 60 |
| | BAYHTRK116A | 208 / 240 | 11.22 / 14.94 | 75 / 85 | 80 / 90 | 100 / 100 | 68 / 78 | 70 / 80 | 70 / 100 |

NOTES:
1. Any power supply and circuits must be wired and protected in accordance with local electrical codes.
2. The MCA values listed are for electric heater and cooling unit.
3. Field wire must be rated at least 75°C.
4. The HACR circuit breaker is for U.S.A. installations only.
5. For Canada installation reference only
**6. BAYHTRK111A only approved for WCK024A1/WCK024B1**
**7. BAYHTRK106A only approved for TCK048A1**
8. The MCA values listed are for electric heater only.
9. The MCA values listed are for electric heater and heat pump.

# Field Installed Control Options

**Thermostats**
Two stages heating/cooling or one stage heating/cooling thermostats are available in either manual or automatic changeover.

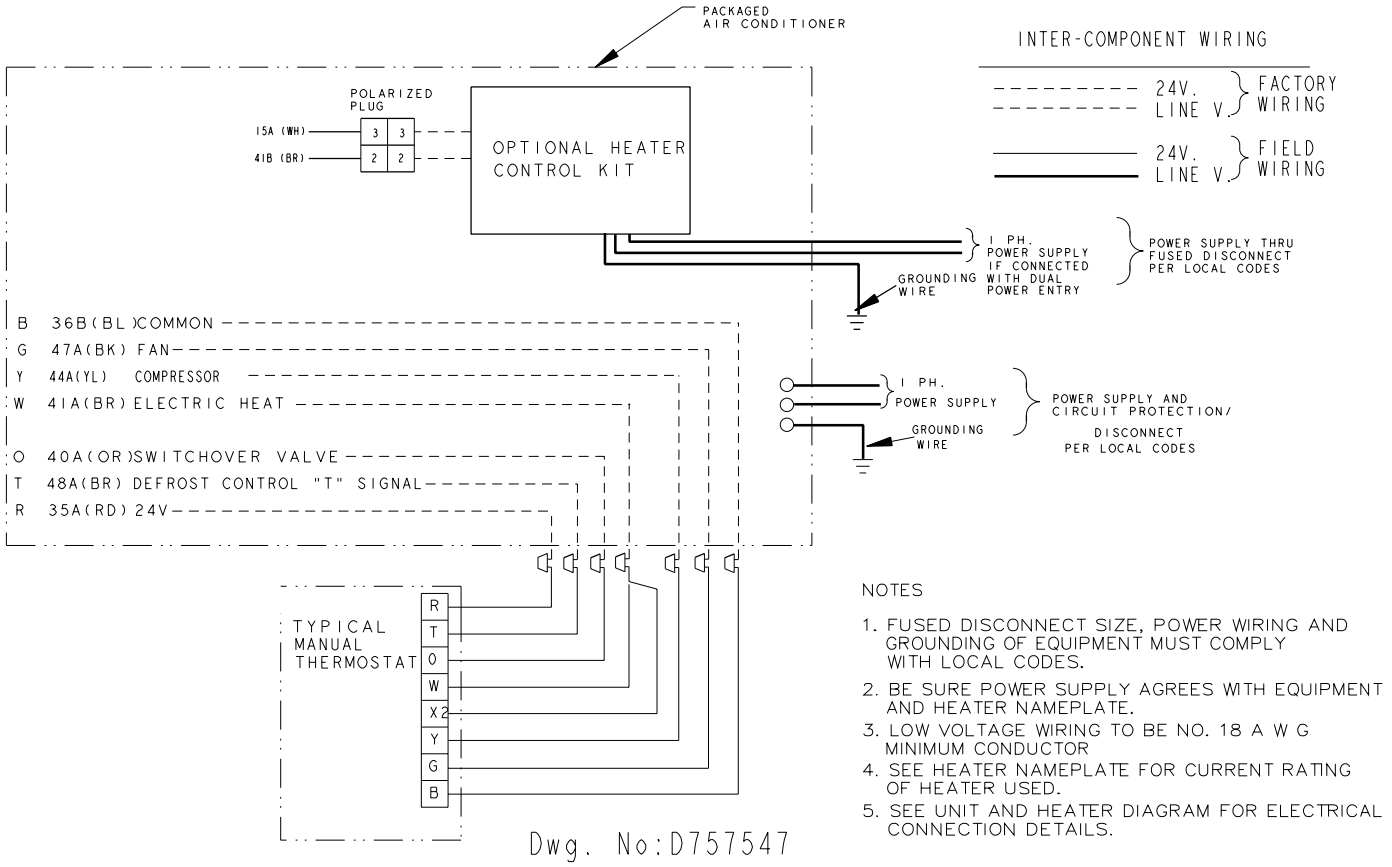
**Programmable Electronic Night Setback Thermostat**
Heating setback and cooling setup with 7-day, 5-1-1 programming capability. Available in two heating/cooling or one heating/cooling versions with automatic changeover.

**Supplemental Electric Heater**
Heater module mounts in unit discharge air passage. Each heater assembly includes automatically resetting heat limit switches for thermal protection. A polarized plug provides connection to unit low voltage control wiring.

**Low Ambient Control Kit**
Provides low ambient cooling operation to 0° F.

# Hook Up Diagram

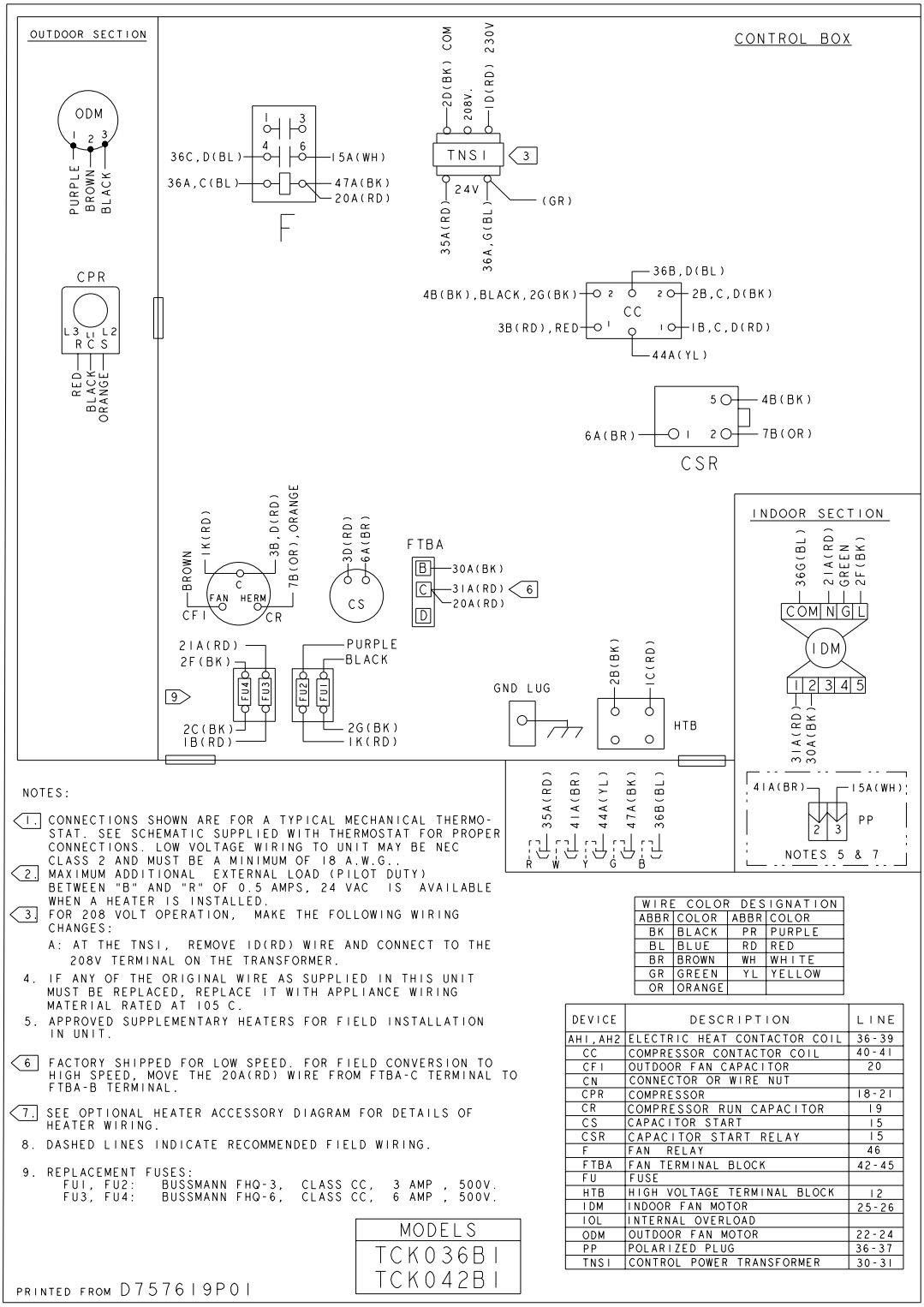
**TCK024, 030, 036, 042B Units (With Supplementary Heaters)**




NOTES

1. FUSED DISCONNECT SIZE, POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
2. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT AND HEATER NAMEPLATE.
3. LOW VOLTAGE WIRING TO BE NO. 18 A W G MINIMUM CONDUCTOR
4. SEE HEATER NAMEPLATE FOR CURRENT RATING OF HEATER USED.
5. SEE UNIT AND HEATER DIAGRAM FOR ELECTRICAL CONNECTION DETAILS.

# Typical Wiring




NOTES:

1. CONNECTIONS SHOWN ARE FOR A TYPICAL MECHANICAL THERMOSTAT. SEE SCHEMATIC SUPPLIED WITH THERMOSTAT FOR PROPER CONNECTIONS. LOW VOLTAGE WIRING TO UNIT MAY BE NEC CLASS 2 AND MUST BE A MINIMUM OF 18 A.W.G..
2. MAXIMUM ADDITIONAL EXTERNAL LOAD (PILOT DUTY) BETWEEN "B" AND "R" OF 0.5 AMPS, 24 VAC IS AVAILABLE WHEN A HEATER IS INSTALLED.
3. FOR 208 VOLT OPERATION, MAKE THE FOLLOWING WIRING CHANGES:
   A: AT THE TNS1, REMOVE 1D(RD) WIRE AND CONNECT TO THE 208V TERMINAL ON THE TRANSFORMER.
4. IF ANY OF THE ORIGINAL WIRE AS SUPPLIED IN THIS UNIT MUST BE REPLACED, REPLACE IT WITH APPLIANCE WIRING MATERIAL RATED AT 105 C.
5. APPROVED SUPPLEMENTARY HEATERS FOR FIELD INSTALLATION IN UNIT.
6. FACTORY SHIPPED FOR LOW SPEED. FOR FIELD CONVERSION TO HIGH SPEED, MOVE THE 20A(RD) WIRE FROM FTBA-C TERMINAL TO FTBA-B TERMINAL.
7. SEE OPTIONAL HEATER ACCESSORY DIAGRAM FOR DETAILS OF HEATER WIRING.
8. DASHED LINES INDICATE RECOMMENDED FIELD WIRING.
9. REPLACEMENT FUSES:
   FU1, FU2: BUSSMANN FHQ-3, CLASS CC, 3 AMP , 500V.
   FU3, FU4: BUSSMANN FHQ-6, CLASS CC, 6 AMP , 500V.

| MODELS |
|---|
| TCK036B1 |
| TCK042B1 |

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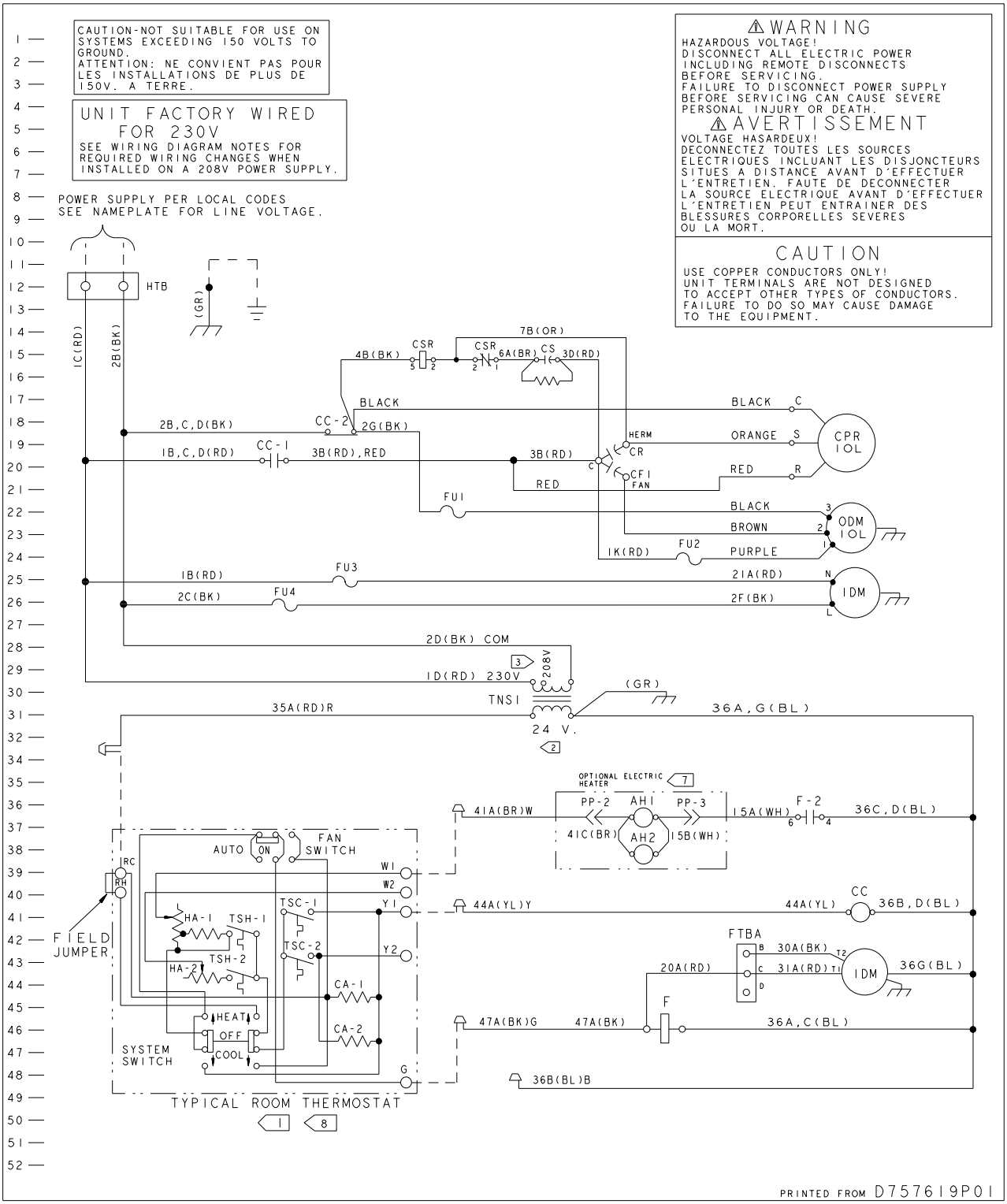
| WIRE COLOR DESIGNATION | | | |
|---|---|---|---|
| ABBR | COLOR | ABBR | COLOR |
| BK | BLACK | PR | PURPLE |
| BL | BLUE | RD | RED |
| BR | BROWN | WH | WHITE |
| GR | GREEN | YL | YELLOW |
| OR | ORANGE | | |

| DEVICE | DESCRIPTION | LINE |
|---|---|---|
| AH1, AH2 | ELECTRIC HEAT CONTACTOR COIL | 36-39 |
| CC | COMPRESSOR CONTACTOR COIL | 40-41 |
| CF1 | OUTDOOR FAN CAPACITOR | 20 |
| CN | CONNECTOR OR WIRE NUT | |
| CPR | COMPRESSOR | 18-21 |
| CR | COMPRESSOR RUN CAPACITOR | 19 |
| CS | CAPACITOR START | 15 |
| CSR | CAPACITOR START RELAY | 15 |
| F | FAN RELAY | 46 |
| FTBA | FAN TERMINAL BLOCK | 42-45 |
| FU | FUSE | |
| HTB | HIGH VOLTAGE TERMINAL BLOCK | 12 |
| IDM | INDOOR FAN MOTOR | 25-26 |
| IOL | INTERNAL OVERLOAD | |
| ODM | OUTDOOR FAN MOTOR | 22-24 |
| PP | POLARIZED PLUG | 36-37 |
| TNS1 | CONTROL POWER TRANSFORMER | 30-31 |

**Typical Wiring Diagram For Specific Wiring see individual Service Facts**

**(continued on next page)**

# Typical Wiring

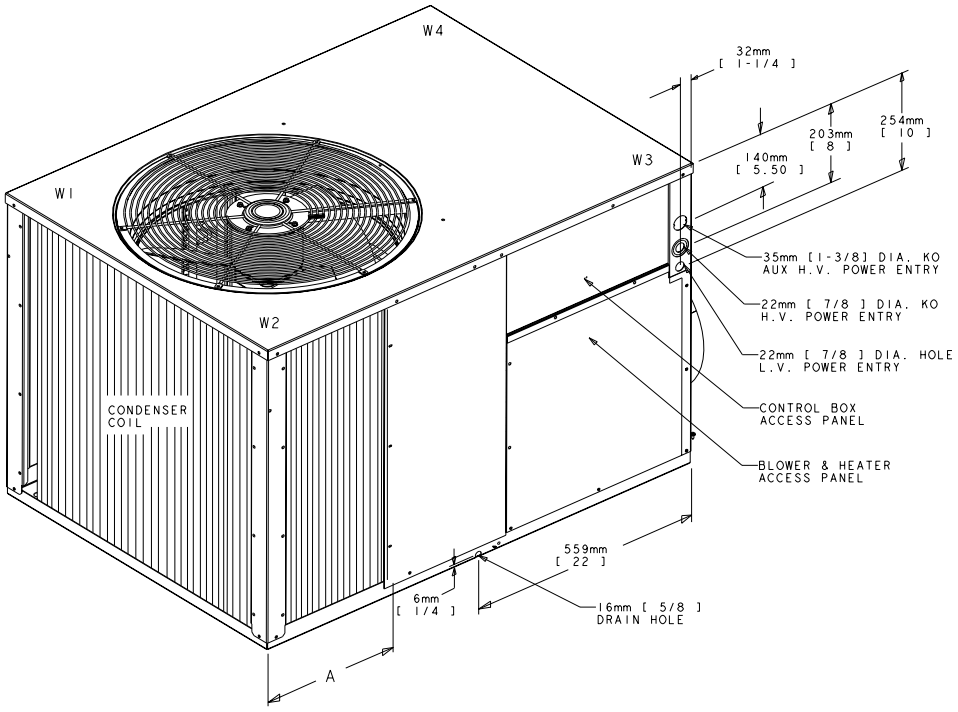



**Typical Wiring Diagram For Specific Wiring see individual Service Facts**

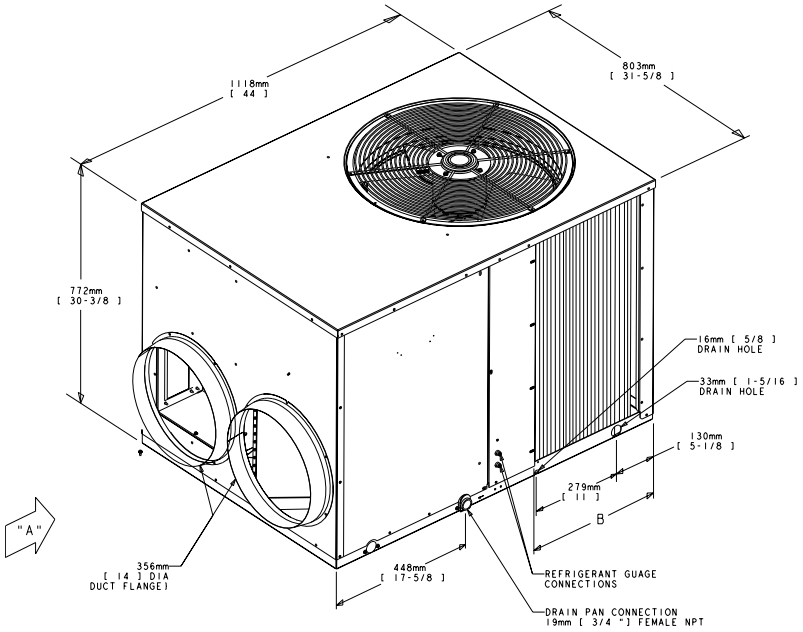
# Dimensional Data

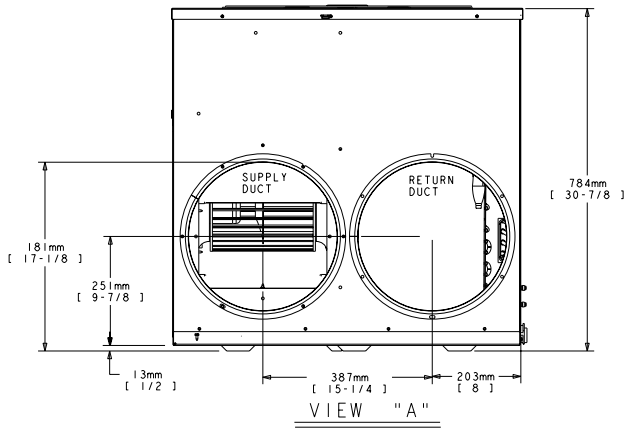
## TCK024-042B OUTLINE DRAWING

**NOTE: ALL DIMENSIONS ARE IN MM (INCHES)**




| INSTALLATION/SERVICE CLEARANCE | |
|---|---|
| BACK | 48.0" |
| LEFT SIDE | 24.0" |
| RIGHT SIDE | 36.0" |
| TOP | 36.0" |




| MODEL | APPROX. CORNER WEIGHT - KG/LBS | | | | TOTAL WEIGHT | COIL DIMENSION | |
|---|---|---|---|---|---|---|---|
| | W1 | W2 | W3 | W4 | KG/LBS | A | B |
| TCK042B1 | 34.90 (77) | 37.20 (82) | 34.90 (77) | 32.70 (72) | 139.70 (308) | 441 (17-3/8) | 413 (16-1/8) |
| TCK036B1 | 33.60 (74) | 36.70 (81) | 33.60 (74) | 30.80 (68) | 134.70 (297) | 441 (17-3/8) | 413 (16-1/8) |
| TCK030B1 | 30.80 (68) | 38.60 (85) | 34.90 (77) | 28.10 (62) | 131.90 (291) | 302 (11-7/8) | 413 (16-1/8) |
| TCK024B1 | 34.0 (75) | 34.0 (75) | 31.30 (69) | 31.30 (69) | 130.2 (287) | 302 (11-7/8) | 413 (16-1/8) |

# Mechanical Specifications

**General**

All units are factory assembled, piped, internally wired and fully charged with R-22. Units are UL listed and carry a UL label. All units are factory run-tested to check cooling and heating operation, defrost operation, fan and blower rotation and control sequence. Units are designed to operate at ambient temperatures between 115° F. and 45° F. in cooling mode (as shipped) and between 75° F. and -20° F. in heating mode. Cooling and heating performances are rated in accordance with ARI standards. Units are designed for either ground level or rooftop installation.

**Unit Casing**

All components are mounted in a weather-resistant steel cabinet with a baked-on enamel finish. Access panels are provided for unit controls, indoor coil and supply air fan. The indoor air section is completely insulated with fireproof, permanent, foil faced odorless glass fiber material and waterproof closed-cell foam base insulation. Knockouts are provided for utility and control connections. Drain connections are provided to accommodate indoor coil water runoff. Coil guards are provided for the protection of the outdoor coil.

**Compressor**

Hermetically sealed, high efficiency Climatuff® compressor designed for heat pump duty. Internal line break over current and over temperature protection, high and low pressure protection.

**Refrigerant Circuit**

All units have thermostatic expansion valve refrigerant control for heating operation and either thermostatic expansion valve refrigerant control for cooling operation. Service pressure tap ports, check valves, solenoid-operated reversing valve, and refrigerant line filter driers are standard.

**Indoor and Outdoor Coil**

Indoor and outdoor coils are constructed of aluminum plate fins mechanically bonded to seamless copper tubing.

**Outdoor Fan**

One, direct-drive, statically and dynamically balanced propeller fan is used in top discharge configuration. Permanently lubricated weatherproof motors have built-in thermal overload protection.

**Indoor Fan**

Forward-curved, centrifugal-type fan with multi-speed, direct-drive motor. Motor shall be permanently lubricated and has built-in overload protection.

**Demand Defrost Control**

The electronic demand defrost control measures outdoor ambient and outdoor coil conditions and eliminates unnecessary defrost cycles.

**Accessories**

**Supplemental Electric Heater —** Heater module shall mount in unit discharge air passage. Each heater assembly includes automatically resetting heat limit switches for thermal protection. A polarized plug provides connection to unit low voltage control wiring.

**Indoor Thermostat —** Two-stage heating, one-stage cooling thermostat is available in either manual or automatic changeover. Thermostat provides automatic or continuous fan operation and includes outdoor thermistor, emergency heat switch with indicator light, and auxiliary heat indicator light.

**Low Ambient Control Kit —** Provides low ambient cooling operation to 0° F.