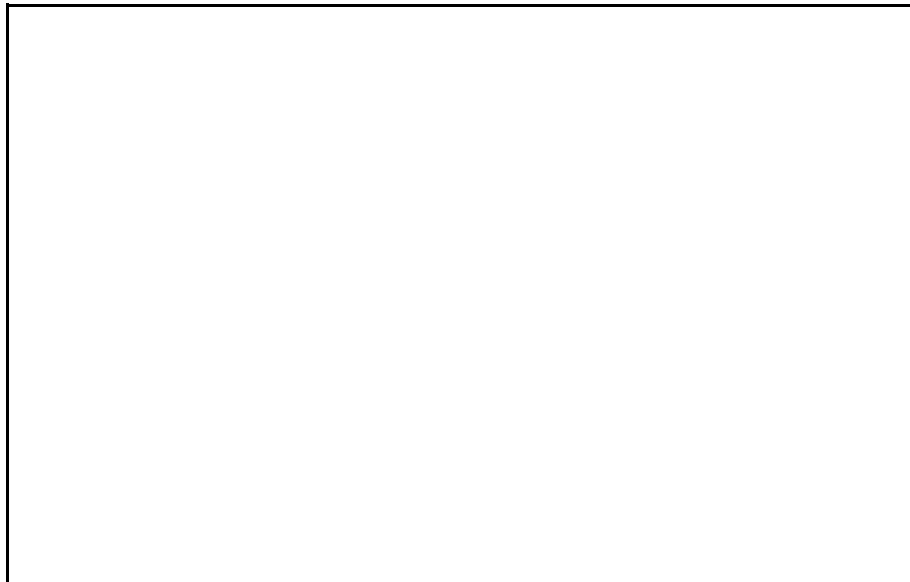




581K*04-06F/K PREFERRED SERIES WITH AXION™ FAN TECHNOLOGY SINGLE PACKAGE ROOFTOP WITH ULTRA LOW NOX GAS HEAT/ELECTRIC COOLING UNITS

- PERFORMANCE DATA**
- CERTIFIED DIMENSION PRINTS**
- CERTIFIED ROOF CURB DETAILS**



JOB NAME:		LOCATION:	
BUYER:		BUYER PO #:	BRYANT#:
UNIT NUMBER:		MODEL NUMBER:	
PERFORMANCE DATA CERTIFIED BY:			
DESCRIPTION 581K*04-06F/K single package, ULTRA LOW NOx units are high-efficiency single-packaged electric cooling, gas heating units that are pre-wired and pre-charged with Puron® (R-410A) HFC refrigerant. The units are factory tested in both heating and cooling modes. All size 04-06 models use two stage cooling capacity control. FEATURES <u>Standard Base Unit</u> • Puron (R-410A) HFC refrigerant • SEERs up to 16.1 • Direct Drive - Axion™ Fan Technology indoor fan system uses Van Axial fan design and electronically commutated motor – Shall have inherent automatic-reset thermal overload protection – Shall require no fan/motor belts for operation, adjustments, and/or initial fan speed setup – Shall be internally protected from electrical phase reversal and loss – Shall have slow ramp up to speed control capabilities to help reduce sound and comfort issues – Shall be a slide-out design with two screw removal – All sizes have two stage cooling capacity control. The indoor fan speed is automatically controlled to meet the AHRI performance requirement • Rated in accordance with AHRI Standards 210/240 • Designed in accordance with Underwriters Laboratories Std 1995 • Listed by UL and UL-Canada • Two-stage cooling capacity control • Corrosive resistant composite sloping design; side or center drain condensate pan. Meets ASHRAE Standard 62 • Standard cooling operating range from 40°F (4°C) up to 125°F (52°C), and down to –20°F (–29°C) with low ambient kit • Field convertible from vertical to horizontal airflow for slab mounting, no special kits required • Two-inch disposable return air filters • Thru-the-bottom power and gas entry capability • Single point gas and electric connections • 24-volt control circuit protected with resettable circuit breaker • Permanently lubricated evaporator-fan motor • Totally enclosed condenser motors with permanently lubricated bearings • Low-pressure and high-pressure switches • Full perimeter base rail with built-in rigging adapters and fork truck slots • New unit control board with intuitive quick fan speed adjustment • ASHRAE 90.1-2016, IECC-2015 energy compliant <u>Cabinet</u> • Access panels with easy grip handles • Innovative, easy starting, no-strip screw feature on unit access panels • Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection • Fully insulated cabinet • Tool-less filter access door <u>Refrigerant System</u> • TXV refrigerant metering device • Liquid line filter drier • Scroll compressors with internal line-break overload protection • Copper tube, aluminum fin coils with optional corrosion resistant coils. Corrosion resistant coils are not available for single phase (-3 voltage) models. • Removable gage line plugs for reading refrigerant pressure with unit panels in place <u>Gas Heat</u> • IGC solid-state gas heat exchanger control for on-board diagnostics, anti-cycle protection, LED error code designation, burner control logic and energy saving indoor fan motor delay • Gas efficiencies up to 81% • Induced draft combustion • Redundant gas valve, with up to 2 stages of heating • Flame roll-out safety protector • Solid-state electronic direct spark ignition system • Ultra Low NOx 3 to 5 ton models that meet California Air Quality Management NOx requirement of 14 nano-grams/joule. Ultra Low NOx models include stainless steel heat exchangers. <u>Standard Limited Parts Warranty</u> • 10-year gas heat exchanger parts • 5-year compressor parts • 5-year Ultra Low Leak Economizer parts • 1-year parts			

PERFORMANCE DATA

Unit Operating Weight _____ lb Exhaust Fan Motor Size _____ HP
COOLING Curb Weight _____ lb
Gross Total Capacity _____ Btuh **HEATING (GAS)**
 at Condenser Air Temperature _____ °F Heating Capacity:
Gross Sensible Capacity _____ Btuh Stage 1 _____ Btuh
Compressor Power Input _____ kW Stage 2 _____ Btuh
Indoor Entering: db _____ °F / wb _____ °F Heating Capacity Total _____ Btuh
Airflow _____ CFM External Static Pressure _____ in. wg Stage 1 _____ kW
Indoor Fan Motor Size _____ HP Stage 2 _____ kW
Indoor Fan Motor Setting _____ Vdc Heating Capacity Total _____ kW

ELECTRICAL DATA

Power Supply to Unit _____
Volts _____
Phase _____ Hz
Maximum Circuit Amps _____
Maximum Overcurrent Protection _____

SUBMITTAL DATA

Job Name _____
Architect _____
Engineer _____
Contractor _____
Unit Designation _____



FACTORY-INSTALLED OPTIONS

☐ Economizer with DRY BULB Sensing and Barometric Relief*

Low Leak Air Dampers —

- Models with W7220 controller meet California Title 24-2016 (Section 120.2) for Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er® X system).

☐ Economizer with ENTHALPY Sensing and Barometric Relief*

Low Leak Air Dampers —

- Models with W7220 controller meet California Title 24-2016 (Section 120.2) Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er X system).

☐ Economizer with DRY BULB Sensing and Barometric Relief*

ULTRA LOW LEAK Air Dampers —

- Models with W7220 controller meet California Energy Commission Title 24-2016 prescriptive section 140.4 (damper leakage etc.), and mandatory section 120.2.i for Fault Detection and Diagnostic controls. Economizers meet ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. For outside air, return, and relief air damper leakage requirements economizers meet IECC-2012 section C402.4.5.2 and IECC-2015 sections C403.2.4.3 and C403.3.3.5 and IECC-2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC-2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated — plus 5 year limited parts warranty (EconoMi\$er X system).

☐ Economizer with ENTHALPY Sensing and Barometric Relief*

ULTRA LOW LEAK Air Dampers —

- Models with W7220 controller meet California Energy Commission Title 24-2016 prescriptive section 140.4 (damper leakage etc.), and mandatory section 120.2.i for Fault Detection and Diagnostic controls. Economizers meet ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. For outside air, return, and relief air damper leakage requirements economizers meet IECC-2012 section C402.4.5.2 and IECC-2015 sections C403.2.4.3 and C403.3.3.5 and IECC-2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC-2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated — plus 5 year limited parts warranty (EconoMi\$er X system).

* Not available for single phase (-J voltage) models.

FACTORY-INSTALLED OPTIONS (CONT)

- ☐ RTU Open multi-protocol controller communicates to BACnet*, Modbus†, LonWorks**, and Johnson N2 protocols
- ☐ Through the base connectors for gas and electric conduit/piping
- ☐ Stainless steel gas heat exchanger (includes tubes, vestibule plate and collector box)
- ☐ Perfect Humidity adaptive dehumidification system (This option also includes low ambient controls)
- ☐ Low ambient head pressure controller, down to -20°F (-29°C)
- ☐ HACR circuit breaker††
- ☐ Non-fused disconnect††
- ☐ Powered 115-volt convenience outlet***
- ☐ Non-powered 115-volt convenience outlet
- ☐ High static evaporator fan motor
- ☐ Return air smoke detector

- ☐ Supply air smoke detector
- ☐ CO₂ sensor
- ☐ Condenser hail guard-louvered style
- ☐ Special coating protection for evaporator and condenser coils***
- ☐ Hinged panels for easy unit access
- ☐ Foil faced insulation throughout entire cabinet
- ☐ MERV-8 return air filters
- ☐ Phase monitor protection (3-Phase models only)
- ☐ Condensate overflow switch
- ☐ Cu/Cu (indoor) coils***

Optional Warranties

- ☐ Complete unit parts only, up to 5 years
 - ☐ Complete unit parts and labor, up to 5 years
- Many other optional warranties are available. See the Commercial Start-Up and Optional Extended Warranty Price pages for further information.

* BACnet is a trademark of ASHRAE.
 † Modbus is a registered trademark of Schneider Electric.
 ** LonWorks is a registered trademark of Echelon Corporation.
 †† Not available on 460 volt models
 *** Not available on single-phase models.

FIELD-INSTALLED ACCESSORIES

NOTE: 581K*04-06F/K models use two-speed indoor fan logic, the W7212 controller is designed for single-speed motor control. See Application Tip “ROOFTOP-18-01” for further guidance when using this unit.

☐ Economizer with DRY BULB Sensing and Barometric Relief*

Low Leak Air Dampers —

- Models with W7212 controller meet California Title 24-2016 Section 120.2.i for Fault Detection and Diagnostic (FDD) requirements (EconoMiSer X system).
- Models with W7220 controller meet California Title 24-2016 Section 120.2.i for Fault Detection and Diagnostic (FDD) requirements (EconoMiSer X system).

☐ Economizer with ENTHALPY Sensing and Barometric Relief*

Low Leak Air Dampers —

- Models with W7212 controller meet California Title 24-2016 Section 120.2.i for Fault Detection and Diagnostic (FDD) requirements (EconoMiSer X system).
- Models with W7220 controller meet California Title 24-2016 Section 120.2.i Fault Detection and Diagnostic (FDD) requirements (EconoMiSer X system).

☐ Economizer with DRY BULB Sensing and Barometric Relief*

ULTRA LOW LEAK Air Dampers —

- Models with W7220 controller meet California Energy Commission Title 24-2016 prescriptive section 140.4 (damper leakage etc.), and mandatory section 120.2.i for Fault Detection and Diagnostic controls. Economizers meet ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. For outside air, return, and relief air damper leakage

requirements economizers meet IECC-2012 section C402.4.5.2 and IECC-2015 sections C403.2.4.3 and C403.3.3.5 and IECC-2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC-2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated — plus 5 year limited parts warranty (EconoMiSer X system).

☐ Economizer with ENTHALPY Sensing and Barometric Relief*

ULTRA LOW LEAK Air Dampers —

- Models with W7220 controller meet California Energy Commission Title 24-2016 prescriptive section 140.4 (damper leakage etc.), and mandatory section 120.2.i for Fault Detection and Diagnostic controls. Economizers meet ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. For outside air, return, and relief air damper leakage requirements economizers meet IECC-2012 section C402.4.5.2 and IECC-2015 sections C403.2.4.3 and C403.3.3.5 and IECC-2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC-2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated — plus 5 year limited parts warranty (EconoMiSer X system).

* Not available for single phase (-J voltage) models.

FIELD-INSTALLED ACCESSORIES (CONT)

NOTE: 581K*04-06F/K models use two-speed indoor fan logic, the two-position damper and manual dampers are designed for single-speed motor control. See Application Tip “ROOFTOP-18-01” for further guidance when using this unit.

- ☐ Power exhaust — prop fan design
- ☐ Two-position motorized outdoor air damper
- ☐ Manual outside air damper 25%
- ☐ Manual outside air damper 50%
- ☐ Roof curb — 14 inch (356 mm) tall
- ☐ Roof curb — 24 inch (610 mm) tall
- ☐ Horizontal roof curb adapts to standard base unit and directs airflow horizontally
- ☐ Thru-the-bottom connections, electrical only
- ☐ Thru-the-bottom connections, electrical and gas
- ☐ Thru-the-bottom electrical, control, and gas connection kit
- ☐ Thru-the-bottom electrical and thru-the-curb gas connection kit
- ☐ Condenser hail guard, louvered style
- ☐ Flue shield
- ☐ Flue discharge deflector
- ☐ Liquid propane (LP) conversion kit
- ☐ High altitude conversion kit
- ☐ Phase monitor (loss of phase/phase reversal)
- ☐ Winter start kit, down to 25°F (−4°C)

- ☐ Low ambient head pressure controller, down to 0°F (−18°C)
- ☐ Low ambient head pressure controller, down to −20°F (−29°C)
- ☐ Time Guard II compressor anti-cycle protection
- ☐ Condensate overflow switch
- ☐ Non-powered 115-volt (20 amp) convenience outlet
- ☐ Condensate overflow switch
- ☐ Motor status indicator switch
- ☐ Fan/Filter status indicator switch
- ☐ Thermostats and sensors

NOTE: These models have two stage cooling capability, use appropriate thermostat.

Economizer Sensors

- ☐ Single dry bulb control
- ☐ Differential dry bulb control
- ☐ Single enthalpy control
- ☐ Differential enthalpy control
- ☐ CO₂ — wall mounted
- ☐ CO₂ — duct mounted
- ☐ CO₂ — unit mounted

UNIT DIMENSION PRINT

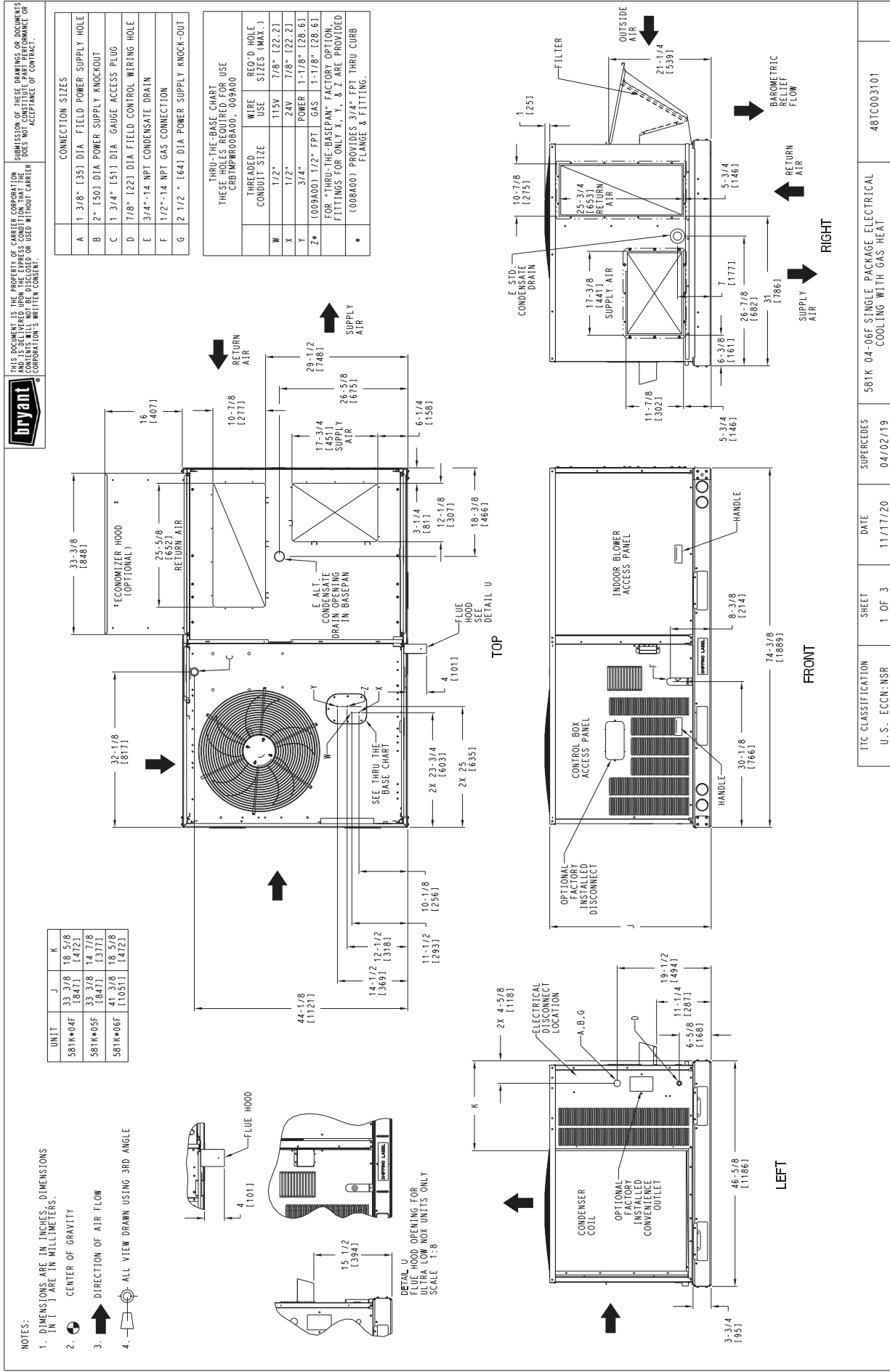
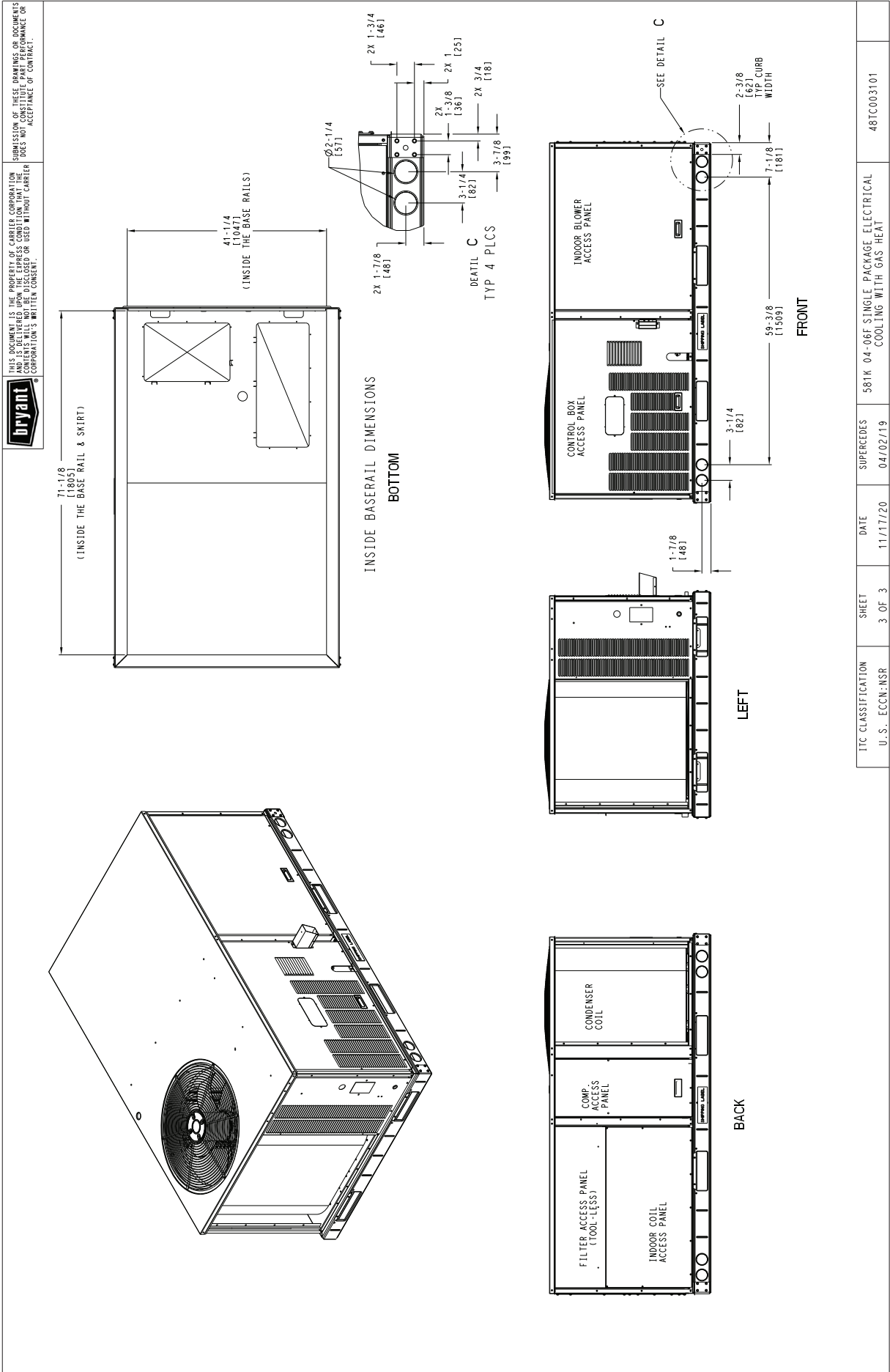


Fig. 1 — 581K*04-06F/K Unit Dimensions

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UNIT DIMENSION PRINT



ITC CLASSIFICATION
U.S. ECON: NSR

SHEET
3 OF 3

DATE
11/17/20

SUPERCEDES
04/02/19

581K 04-06F SINGLE PACKAGE ELECTRICAL
COOLING WITH GAS HEAT

48TC003101

Fig. 1 — 581K*04-06F/K Unit Dimensions (cont)

ACCESSORY DIMENSION PRINT

ROOF CURB ACCESSORY #	A
CRRFCURB001A01	14" [356]
CRRFCURB002A01	24" [610]

NOTES:

1. ROOF CURB ACCESSORY IS SHIPPED DISASSEMBLED.
2. INSULATED PANELS: 25.4 [1"] THK. POLYURETHANE FOAM, 44.5 [1.74"] # DENSITY.
3. DIMENSIONS IN [] ARE IN MILLIMETERS.
4. ROOF CURB: 18 GAGE STEEL.
5. ATTACH DUCTWORK TO CURB, (FLANGES OF DUCT REST ON CURB).
6. SERVICE CLEARANCE 4 FEET ON EACH SIDE.
7.  DIRECTION OF AIR FLOW.
8. CONNECTOR PACKAGE CRB8MPWR03A01 IS FOR THRU-THE-CURB GAS TYPE PACKAGE CRB8MPWR03B01 IS FOR THE-BOTTOM TYPE GAS CONNECTIONS.

CONNECTOR PKG. ACC.	GAS CONNECTION TYPE	GAS FITTING	POWER WIRING FITTING	CONTROL WIRING FITTING	ACCESSORY CONVENIENCE OUTLET WIRING CONNECTOR
CRBTMPWR001A01	THRU THE CURB	3/4" [19] NPT		1/2" [12.7] NPT	
CRBTMPWR003A01	THRU THE BOTTOM	1/2" [12.7] NPT	3/4" [19] NPT	1/2" [12.7] NPT	1/2" [12.7] NPT

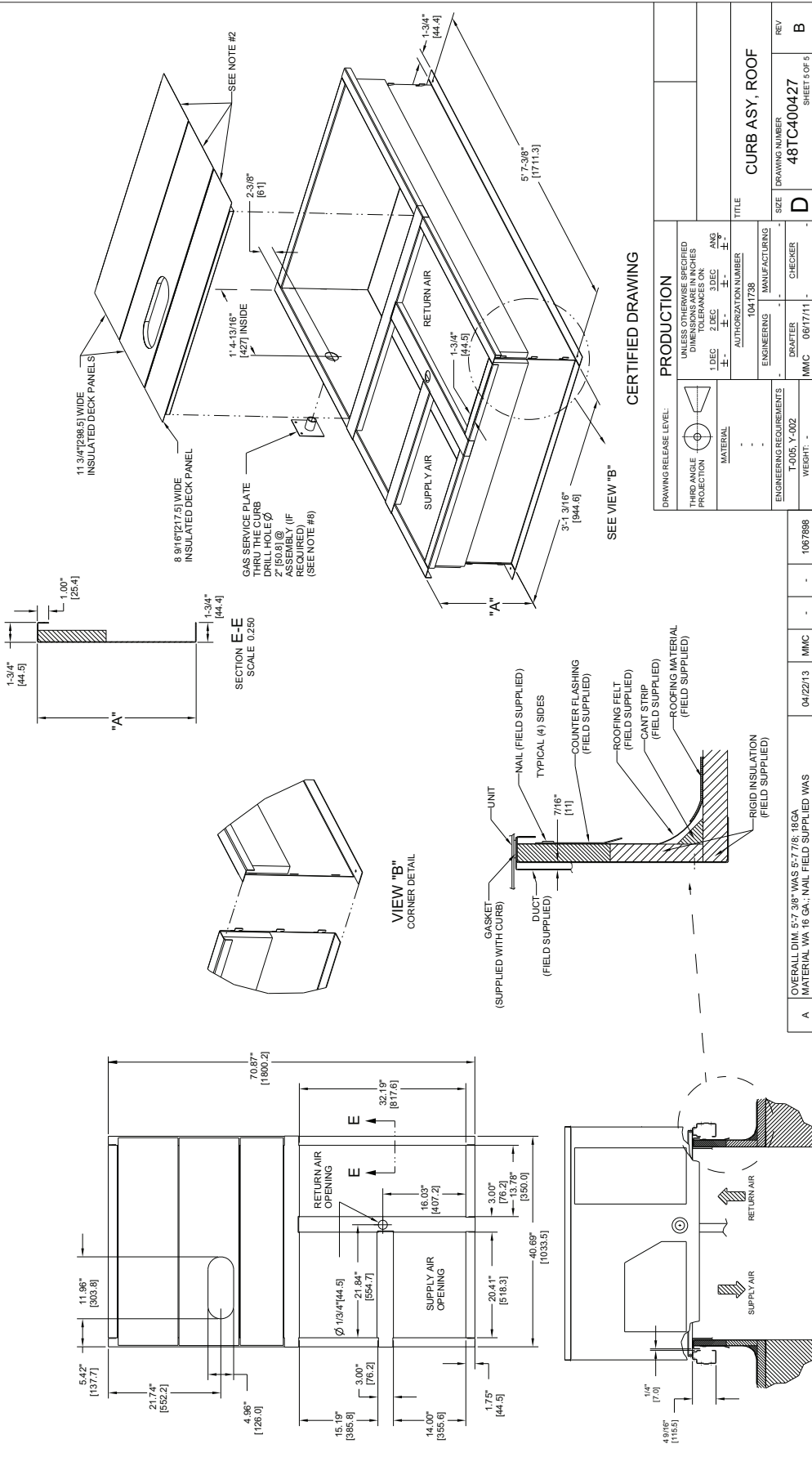


Fig. 2 — 581K*04-06F/K Roof Curb Dimensions

