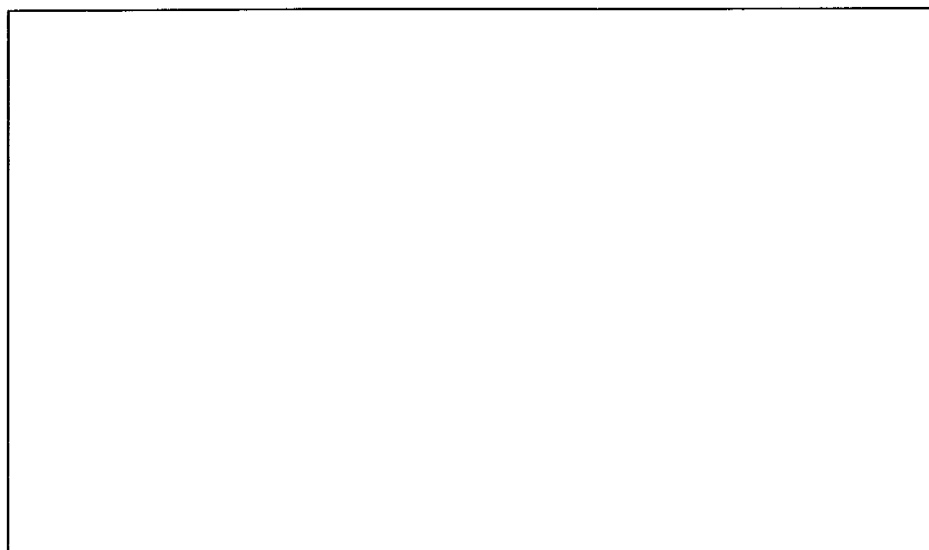




50NB,NP-1SB

**50NB,NP 024, 028, and 030
SINGLE-PACKAGE COOLING UNITS
CONSTANT/VARIABLE VOLUME
PRODUCT INTEGRATED CONTROLS
CARRIER COMFORT NETWORK COMPATIBLE
FACTORY-INSTALLED OPTIONAL
ELECTRIC HEAT**

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



Date:	Supersedes:	50NB, NP 024, 028, 030, SINGLE-PACKAGE COOLING UNITS, FACTORY INSTALLED OPTIONAL ELECTRIC HEAT, WITH PRODUCT INTEGRATED CONTROLS	50NB,NP	Rev.:
JOB NAME:		LOCATION:		
BUYER:		BUYER P.O. #	CARRIER #	
UNIT NUMBER:		MODEL NUMBER:		
PERFORMANCE DATA CERTIFIED BY:				DATE:

50NP 024, 028, 030 ROOF CURB

DESCRIPTION

50NB,NP units are one piece cooling/heating or cooling only units with PRODUCT INTEGRATED CONTROLS, pre-wired and precharged with R-22.

50NP units are shipped with bottom supply and return air openings. Their waterproof construction makes them ideally suited for installation on the accessory roof curb which is NRCA approved. The ductwork attaches directly to the roof curb before the unit is installed.

50NB units are shipped with horizontal supply and return air openings. 50NB units may be installed on the accessory roof curb or slab mounted. The ductwork attaches directly to the unit.

Units are either CONSTANT VOLUME or VARIABLE-AIR VOLUME depending on the factory installed options selected.



PRODUCT INTEGRATED CONTROL FEATURES

STANDARD CONTROL FUNCTIONS

Unit compatible with CARRIER COMFORT NETWORK or stand alone operation.

Constant Volume or Variable Air Volume control.

Four to six stages of compressor unloading possible.

Supply fan control based on occupancy schedule using 365 day electronic timeclock with holiday scheduling.

Time schedule override through the space temperature sensor provided with the unit.

Compatible with 37H and 45 Series PIC terminals to form a Digital Air Volume system (DAV).

Building pressurization control in conjunction with modulating power exhaust option.

Supply duct static pressure controlled through inlet guide vanes or field supplied inverter.

Head pressure control to -20° F. Head pressure controlled by saturated condensing temperature, low ambient control utilizes Motormaster II fan cycling.

Lead-lag compressor control to even out run time.

Self-diagnostic run test confirms control and component operation at unit commissioning. Self-diagnostic troubleshooting codes indicate the reason unit tripped to expedite unit repair. Codes expand to English Text.

Control of a two-speed supply fan motor on CV applications. (Two-speed motor available on Special Order.)

Building Purge Mode flushes building interior with outdoor air to remove contaminants before occupancy.

Adaptive Optimal Start minimizes the amount of time and energy required before entering the occupied mode.

Unoccupied Mode Free Cooling – units with optional economizer will utilize free cooling whenever possible to maintain the unoccupied setpoint.

Input/Output of data and monitoring of alarms can be done remotely using Building Supervisor, or at the unit using the accessory HSIO module.

Delayed Mechanical Cooling – units with optional economizer will utilize cooling to cool the space 3 degrees below the occupied setpoint to delay the need for mechanical cooling.

ADDITIONAL CONTROL FUNCTIONS

AVAILABLE THROUGH FACTORY INSTALLED "OPTION MODULE"

Provides a discrete output with occupancy control for use as specified by the customer.

Controls a field installed humidifier using a 4-20 mA output or 2 stage. Requires accessory humidity sensor.

Smoke Control functions (Building Pressurization and Smoke Purge) are provided through software. Terminals are provided to interface with field supplied smoke/fire panel.

Provides a 4-20 mA output to direct or reverse proportional hot water control valve for field supplied hydronic heating coil. Requires a field supplied freeze-stat to protect coil.

Factory installed suction and discharge pressure transducers and suction temperature thermistors allow remote monitoring of these parameters and superheat to provide enhanced remote diagnostics.

Differential enthalpy control can be provided using field installed accessory humidity sensors.

Economizer control field configurable to:

- Maintain a minimum economizer setpoint position,
OR
- Maintain the minimum economizer position based on input from an IAQ sensor (field supplied 0-10 volt),
OR
- Maintain a constant CFM of outdoor air intake (Requires accessory Outdoor Air CFM package),
OR
- Look at all three above and maintain minimum economizer position based on the dominant parameter.

UNIT FEATURES

Large hinged access doors.
Standard one-year product warranty.
Standard unit as factory-assembled is listed by ETL and/or CSA.
Units are rated in accordance with ARI Standard 360.
115-volt and 24-volt control circuit.
Semi-hermetic Carrier compressors.
Dual refrigeration circuits.
Crankcase heaters.
Compressor protection includes high and low pressure cutouts and compressor discharge temperature sensor.

Cabinet made of Weather Armor and insulated with neoprene-coated fiberglass.
Evaporator fan motors are protected by circuit breakers.
Condenser fan motors are internally protected.
Single-point electric service entry.
Circuit breaker protection for all power components.
Lifting lugs.
Fixed speed main blower drive with optional drive.
Two-inch disposable-type return air filters.
Five-year non prorated warranty on heater element is standard when heater is factory installed.

PERFORMANCE DATA

Unit Operating Weight _____ lbs. Curb Weight _____ lbs.
Indoor Entering Air dB _____ F wB _____ F
CFM _____ External Static Pressure _____ in. wg

COOLING

Gross Total Capacity _____ Btuh @ Condenser Air Temp _____ F
Gross Sensible Capacity _____ Btuh
Compressor Power Input _____ kW

HEATING

Heating Capacity Total _____ Btuh
Heating Capacity Total _____ kW

ELECTRICAL DATA

Power Supply to Unit _____ Volts _____ Phase _____ Hertz
Minimum Circuit Amps _____ Maximum Fuse Amps _____

OPTIONS AND ACCESSORIES

FACTORY-INSTALLED OPTIONS

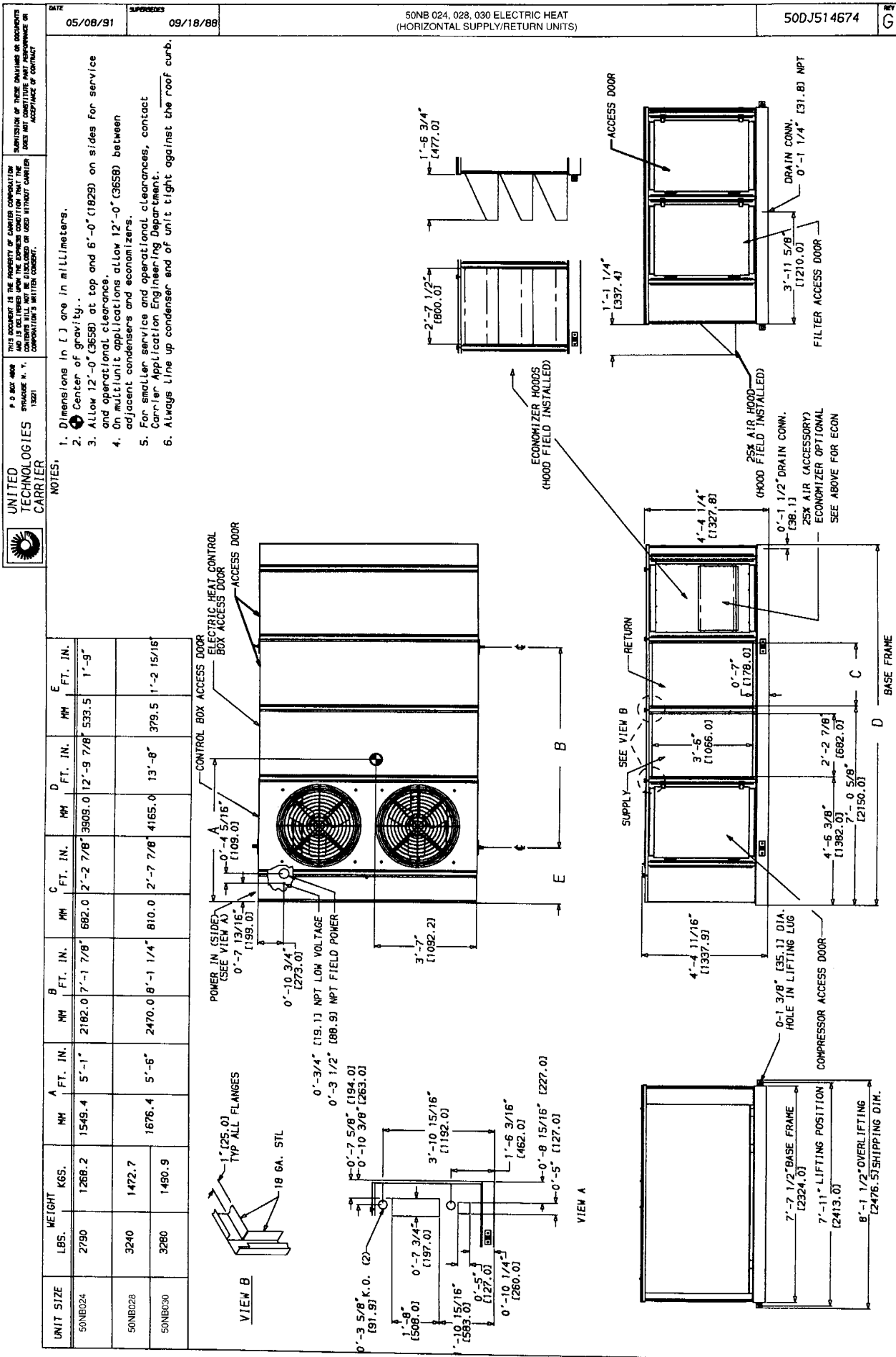
- ☐ Control option module
- ☐ Inlet guide vanes
- ☐ Alternate motor and drive
- ☐ High-efficiency motor and drive (208/230, 460v)
- ☐ Alternate high-efficiency motor and drive (208/230, 460v)
- ☐ Economizer with low leak dampers and spring return motor
- ☐ Copper condenser coil
- ☐ Modulating power exhaust*
- ☐ Barometric relief*
- ☐ Hot gas bypass
- ☐ Electric heat _____ kW

FIELD-INSTALLED ACCESSORIES

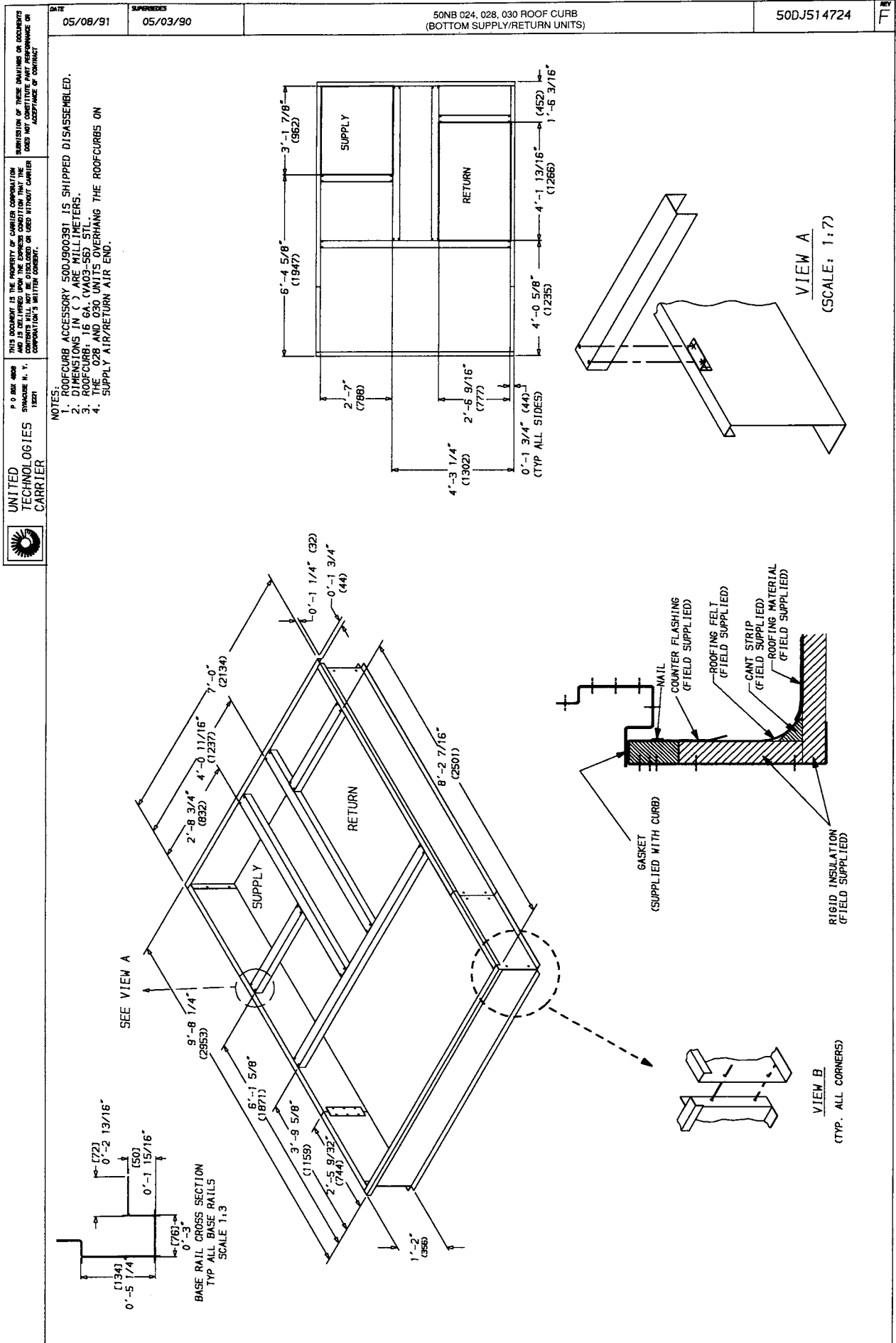
- ☐ 25% outdoor air package
- ☐ Economizer hood assembly
- ☐ Barometric relief hood assembly
- ☐ Power exhaust hood assembly
- ☐ Differential enthalpy control sensor
- ☐ Barometric relief package
- ☐ Modulating power exhaust package
- ☐ Optional 5-year extended heat exchanger warranty
- ☐ Optional 4-year extended compressor warranty
- ☒ HSI0 keypad and display module (required for initial start-up)
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ Outdoor air CFM package
- ☐ Local interface device
- ☐ Condenser coil guard
- ☐ Roof curb
- ☐ Space thermostat
- ☐ Electric heat

* Unit mounted on vertical supply/return applications

CERTIFIED DIMENSION PRINT



CERTIFIED ROOF CURB DIMENSION PRINT



6

6

CERTIFIED ROOF CURB DIMENSION PRINT

