

Project Name: **454B Stock**

Unit Model #: **KV20N3CP2A1AAA81A1**

Quantity: **1**

System: **KV20N3CP2A1AAA81A1**

Cooling Performance

Total gross capacity	255.4 MBH
Sensible gross capacity	171.0 MBH
Efficiency (at ARI)	10.80 EER
Integrated eff. (at ARI)	14.00 IEER
Ambient DB temp.	95.0 °F
Entering DB temp.	80.0 °F
Entering WB temp.	67.0 °F
Evap Coil Leaving DB temp.	60.2 °F
Evap Coil Leaving WB temp.	57.0 °F
Unit Leaving DB temp.	61.6 °F
Unit Leaving WB temp.	57.4 °F
Leaving air temp dew point	54.90 °F
Sound power	82 dB(a)

Refrigerant

Refrigerant type	R-454B
Sys1	10 lb
Sys2	10 lb 12 oz

Gas Heating Performance

Entering DB temp.	60 °F
Heating output capacity (Max)	324.0 MBH
Supply air	8000 cfm
Heating input capacity (Max)	400 MBH
Leaving DB temp.	97.5 °F
Air temp. rise	37.5 °F
SSE	81.0 %
Stages	2

Supply Air Blower Performance

Supply air	8000 cfm
Ext. static pressure	0.6 IWG
Blower speed	947 rpm
Max BHP of Motor (including service factor)	5.75 HP
Duct location	Bottom
Motor rating	5.00 HP
Actual required BHP	3.88 HP
Power input	3.62 kW
Elevation	0 ft
Drive type	BELT

Electrical Data

Power supply	208-3-60	230-3-60
Unit min circuit ampacity	110 A	111.2 A
Unit max over-current protection	125 A	150 A

Dimensions & Weight

Hgt 49 in	Len 144 in	Wth 89 in
Weight with factory installed options		2105 lb

Clearances

Right	42 in	Front	80 in	Rear	36 in
Top	120 in	Bottom	0 in	Left	18 in

Note: Please refer to the tech guide for listed maximum static pressures



Unit Features

- Refrigerant Detection System (RDS) is Factory Installed
- Two Stage Compressor Operation
- Two independent refrigerant circuits
- Full Perimeter Base Rails with Built in Rigging Capabilities
- 5 HP Medium Static Belt Drive Blower
- 2" Throwaway Filter
- Replacement Filters: 6 (20" x 25" x 2" or 4"). Unit accepts 2" or 4" wide filters.
- Units are provided with the selected 2-inch or 4-inch filter and can easily be converted in the field to accept either size in the standard filter rack
- Utility Connections - Gas and electrical utility locations are supplied in the unit underside as well as the side of the unit. Utility connections can be made quickly and with a minimum amount of field labor
- Copper tube/Aluminum fin evaporator coils
- Microchannel condenser coils

20 Ton

- Manufactured at an ISO 9001 Registered Facility and Each Rooftop is Completely Computer-Run Tested Prior to Shipment.

Standard Unit Controller: Smart Equipment Control Board

- An Integrated Low-Ambient Control, Anti-Short Cycle Protection, Lead-Lag, Fan On and Fan off Delays, Low Voltage Protection, On-Board Diagnostic and Fault Code Display. Allows all units to operate in the cooling mode down to 0 °F outdoor ambient without additional components or intervention.
- Safety Monitoring - Monitors the High and Low-Pressure Switches, the Freezestats, the Gas Valve, if Applicable, and the Temperature Limit Switch on Gas and Electric Heat Units. The Unit Control Board will Alarm on Ignition Failures, Safety Lockouts and Repeated Limit Switch Trips.

BAS Controller

- Smart Equipment Controller including Discharge Air, Return Air, and Outdoor Air Temperature Sensors.

Warranty

- One (1) Year Limited Warranty on the Complete Unit
- Five (5) Year Warranty - Compressors and Electric Heater Elements
- Ten (10) Year Warranty - Aluminized Steel Tubular Heat Exchangers



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Additional Electrical Data

Power supply	208-3-60
Unit min circuit ampacity	110 A
Unit max over-current protection	125 A
Min Voltage	180 V
Max Voltage	254 V
Comp #1 RLA	32.7
Comp #1 LRA	267
Comp #2 RLA	39.1
Comp #2 LRA	267
Indoor Mtr Voltage	208-3-60
Indoor Mtr FLA	20.4
Outdoor Mtr Qty	4
Outdoor Fan Voltage	208-1-60
OD Fan Mtr FLA (ea.)	2
Power Ex Mtr Qty (if applicable)	2
Powered Ex Voltage(if applicable)	208-1-60
Power Ex Mtr FLA (ea) (if applicable)	5
Combustion Mtr Qty	1
Combustion Motor Voltage	208/230-1-60
Combustion Mtr FLA (ea)	0.8



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Quantity: 1

System: KV20N3CP2A1AAA81A1

Factory Installed Options

KV20N3CP2A1AAA81A1

Equipment Options		Option(s) Selected
Product Category:	K	York SunChoice Single Packaged R-454B Air Conditioner
Efficiency:	V	Standard Efficiency, Bottom Duct
Nominal Cooling Capacity:	20	20 Ton
Heat Type:	N	Natural Gas, Staged Heat
Heat Size:	3	High Heat, 400 MBH Input
Blower Option:	C	5 HP Medium Static Belt Drive Blower
Air Volume:	P	Two Stage Compressor Operation IntelliSpeed control of the VFD based on stages of cooling. Provides Single Zone VAV Fan Operation as defined by ASHRAE 90.1 section 6.4.3.10.
Voltage:	2	208/230-3-60
Outside Air Option:	A	
Coil Options:	1	Microchannel condenser coils Copper tube/Aluminum fin evaporator coils
Controls:	A	Smart Equipment Controller including Discharge Air, Return Air, and Outdoor Air Temperature Sensors.
Sensor Options:	A	Refrigerant Detection System
Service Options:	A	
Refrigeration:	8	
Additional Options:	1	2" Throwaway Filter
Cabinet Options:	A	Standard Cabinet Polyester SMC Drain Pan
Product Generation:	1	

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KV 20T Submittal

TONNAGE	OPERATING WEIGHT (LBS) (BASE UNIT)	CENTER OF GRAVITY LOCATION (BASE UNIT)		4 POINT CORNER LOADS (LBS) (BASE UNIT)				6 POINT CORNER LOADS (LBS) (BASE UNIT)					
		X	Y	A	B	C	D	A	B	C	D	E	F
AV/KV20	1930 (875)	69.8 (1772.9)	49.1 (1247.1)	444 (201)	419 (190)	518 (235)	549 (249)	299 (136)	277 (126)	342 (155)	370 (168)	288 (131)	355 (161)

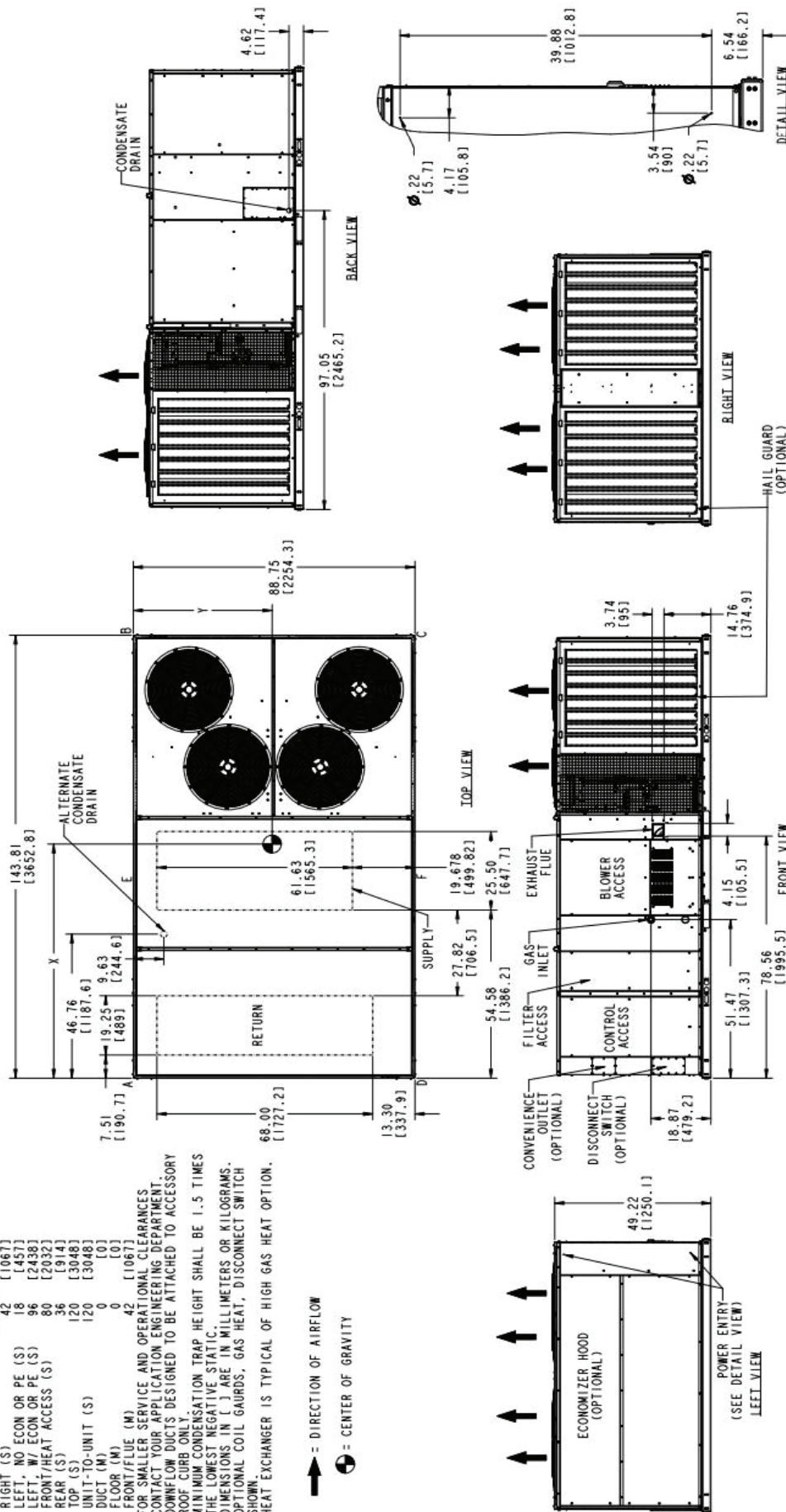
NOTES:

1. FOR OUTDOOR USE ONLY.

2. WEIGHTS SHOWN ARE FOR COOLING ONLY UNITS.

3. SERVICE (S) AND MINIMUM (M) CLEARANCE TO COMBUSTIBLE MATERIAL

COMBUSTIBLE MATERIAL:
UNIT SIDE



REV	DATE	REVISION RECORD						THIRD ANGLE PROJECTION				DRAWING PER ASME Y14.5-2009				TOLERANCES UNLESS OTHERWISE SPECIFIED				ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED				MATERIAL				CAPACITY/CLASS PER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Project Name: 454B Stock

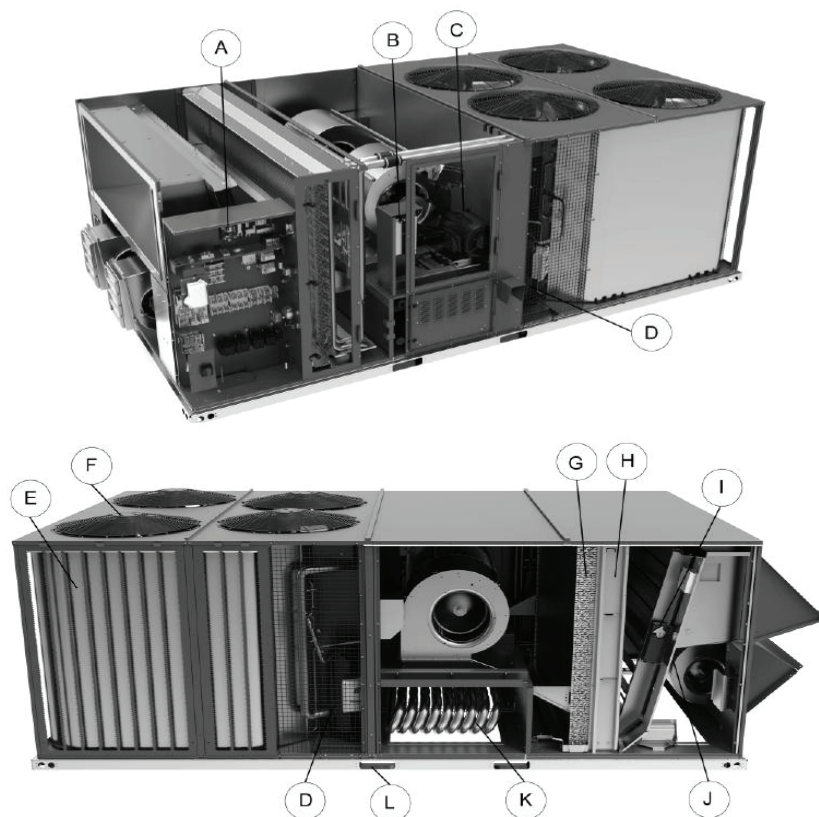
Unit Model #: KV20N3CP2A1AAA81A1

Quantity: 1

Component Location

Unit components

Figure 1: Component location



The previous figure shows the AVXX model. The following table lists the components of the unit.

Table 1: Component location table

Item	Description	Item	Description
A	Smart Equipment [™] controls	G	Copper tube/aluminum fin evaporator coil
B	Optional variable frequency drive	H	Filter access, 2-inch or 4-inch filter options
C	Belt drive blower motor with dual centrifugal fan design	I	Optional economizer. Optional manual or motorized outside air dampers not shown.
D	Scroll compressors in various arrangements to produce 2 or 4 stages of cooling depending on the selected model	J	Optional powered exhaust. Optional barometric relief not shown.
E	MicroChannel condenser coils	K	Optional staged or modulating gas heat with aluminized or stainless steel heat exchanger
F	Condenser fans	L	Full perimeter base rails with holes for overhead rigging