



# Aqua-TEC

## INDOOR POOL DEHUMIDIFIERS

### MODEL AR-0121

#### STANDARD FEATURES

##### Performance:

- ◆ Moisture Removal: 68.3#/hr @ 82°F, 60% RH
- ◆ CFM: 5,300 CFM @ 0.5"ESP
- ◆ Ventilation Air Opening for 1,590 CFM

##### Refrigeration Circuit:

- ◆ Evaporator: 8-Row, 8 Fins per Inch, Totally Coated Coil
- ◆ Condenser: 3-Row, 12 Fins per Inch, 100% THR Capacity
- ◆ Scroll Compressor, Vibration Isolated
- ◆ Coaxial Hot-Gas Pool Water Heating, On Demand

##### Fan Assembly:

- ◆ Forward Curved, Double Wide, Double Inlet Fan
- ◆ Blower Motor: Open Drip Proof, Standard Efficiency
- ◆ Vibration Isolation

##### Cabinet:

- ◆ Bottom Supply, Bottom Return, Side Ventilation Opening
- ◆ Service Access to Refrigeration Circuit and Control Panel from One Side
- ◆ 2" Cotton Pleated Air Filters: MERV 6 Minimum Rating
- ◆ 1.5" Insulation: 1.5#/ft<sup>3</sup> Density, Anti-microbial Agent Treated Mat Facing

##### Controls:

- ◆ 24 V Control Voltage
- ◆ Electromechanical Controls
- ◆ Magnetic and Thermal Motor Protection
- ◆ Expanded Terminal Strip for Total Environmental Control
- ◆ Alarm Status for: Refrigerant Circuit High Pressure Trip, Water Flow Interruption

.... **WHEN TOTAL ENVIRONMENTAL CONTROL IS VITAL**



# MODEL AR-0121

		AIRFLOW (CFM)		FILTERS		
		Supply	Return	O/A	QTY	Size (in)
Base Unit R-22 (lbs)	Weight (lbs)	Max.	3,710	1,590	(4)	20" x 24" x 2"
30.0	2,190	Min.	5,300	0		



## SPECIFICATIONS: ENVIRONMENTAL PERFORMANCE

Ratings Based on ARI Standard 910 test conditions of 80°F water temperature, 82°F air temperature and 60% RH

RETURN AIR CONDITION	MOISTURE REMOVAL	SENSIBLE COOLING (btuh)	TOTAL COOLING (btuh)	TOTAL HEAT OF REJECTION (btuh)	MOISTURE REMOVAL & SPACE COOLING	
					50' RUN	100' RUN
78° F / 50%	46.8	94,900	144,300	194,200		
78° F / 60%	61.3	85,300	150,000			
80° F / 50%	49.3	95,000	147,100			
80° F / 60%	64.7	84,800	153,200			
82° F / 50%	52.0	95,000	149,900			
82° F / 60%	68.2	84,300	156,400			
84° F / 50%	54.6	95,000	152,700			
84° F / 60%	71.7	83,800	159,500			
86° F / 50%	57.4	95,000	155,600			
86° F / 60%	75.1	83,200	162,600			

POOL HEATING	
Heat Cap. (btuh)	69,000
Water Flow (gpm)	11.0
Pressure Drop (ft)	9.2
Connections (in)	1 ¼" FPT

SPACE HEATING	
Heat Cap. (btuh)	190,000
Water Flow (gpm)	17.0
Pressure Drop (ft)	2.1
Connections (in)	1 ½" FPT
Ent. Water Temp.	180° F



## SPECIFICATIONS: HEAT REJECTION CONDENSER PERFORMANCE

MAX. AMBIENT	MODEL	CONNECTIONS (in)		UNIT WEIGHT	R-22 ADDER (lbs)	
		HOT GAS	LIQUID		50' RUN	100' RUN
95° F	B-2410	1 ⅛"	7/8"	400	58.0	75.0
100° F	B-3310	1 ⅛"	7/8"	560	62.0	79.0
105° F	B-4310	1 ⅛"	7/8"	840	86.0	102.0

Water-Cooled CONDENSER	
THR (btuh)	194,200
Water Flow (gpm)	30.0
Pressure Drop (ft)	14.8
Connections (in)	1 ½" FPT
R-22 Adder (lbs)	0



## SPECIFICATIONS: ELECTRICAL PERFORMANCE

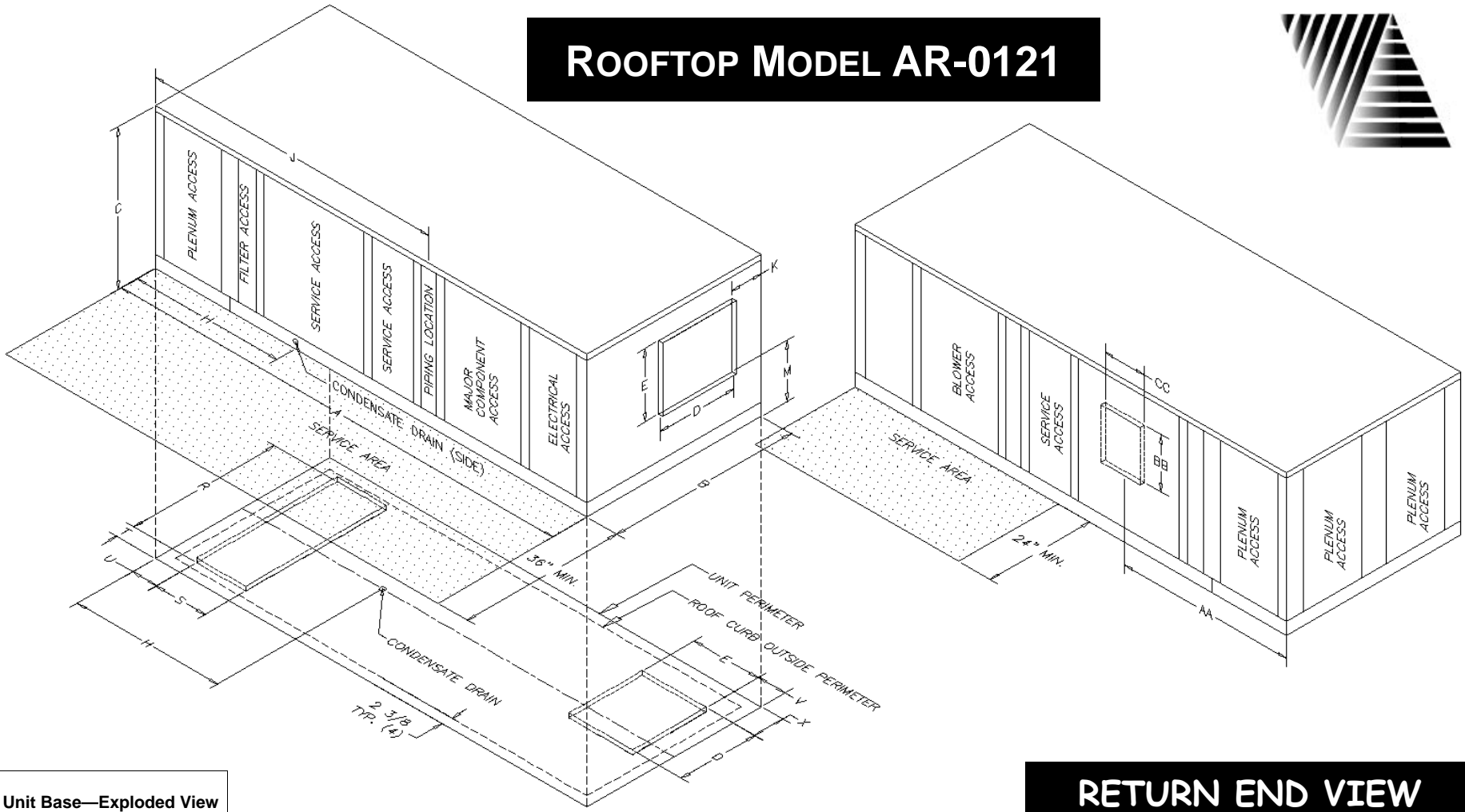
VOLTAGE/PH/Hz	0.5" ESP			1.0" ESP		
	230/3/60*	460/3/60	575/3/60	230/3/60*	460/3/60	575/3/60
Blower (HP)	5	5	5	5	5	5
Blower (FLA)	13.7	6.6	5.3	13.7	6.6	5.3
Compressor (HP)	12.0	12.0	12.0	12.0	12.0	12.0
Compressor (FLA)	47.1	19.6	15.8	47.1	19.6	15.8
Compressor (LRA)	245	125	100	245	125	100
Min. Circuit Amps	72.6	31.1	25.1	72.6	31.1	25.1
Max. Overload Protection Device (Amps)	110	50	40	110	50	40
Unit Min. Wire Size (75° Insulation CU)	# 3	# 8	# 8	# 3	# 8	# 8
Max. Unit Total KW Input	15.7	15.6	15.6	15.7	15.6	15.6
Control Voltage	24	24	24	24	24	24

\* Unit can also operate at 208V

\*\*Electrical performance based on standard unit with no options. Electrical Ratings subject to change with the addition of options.



# ROOFTOP MODEL AR-0121



Unit Base—Exploded View

## RETURN END VIEW

## SUPPLY END VIEW

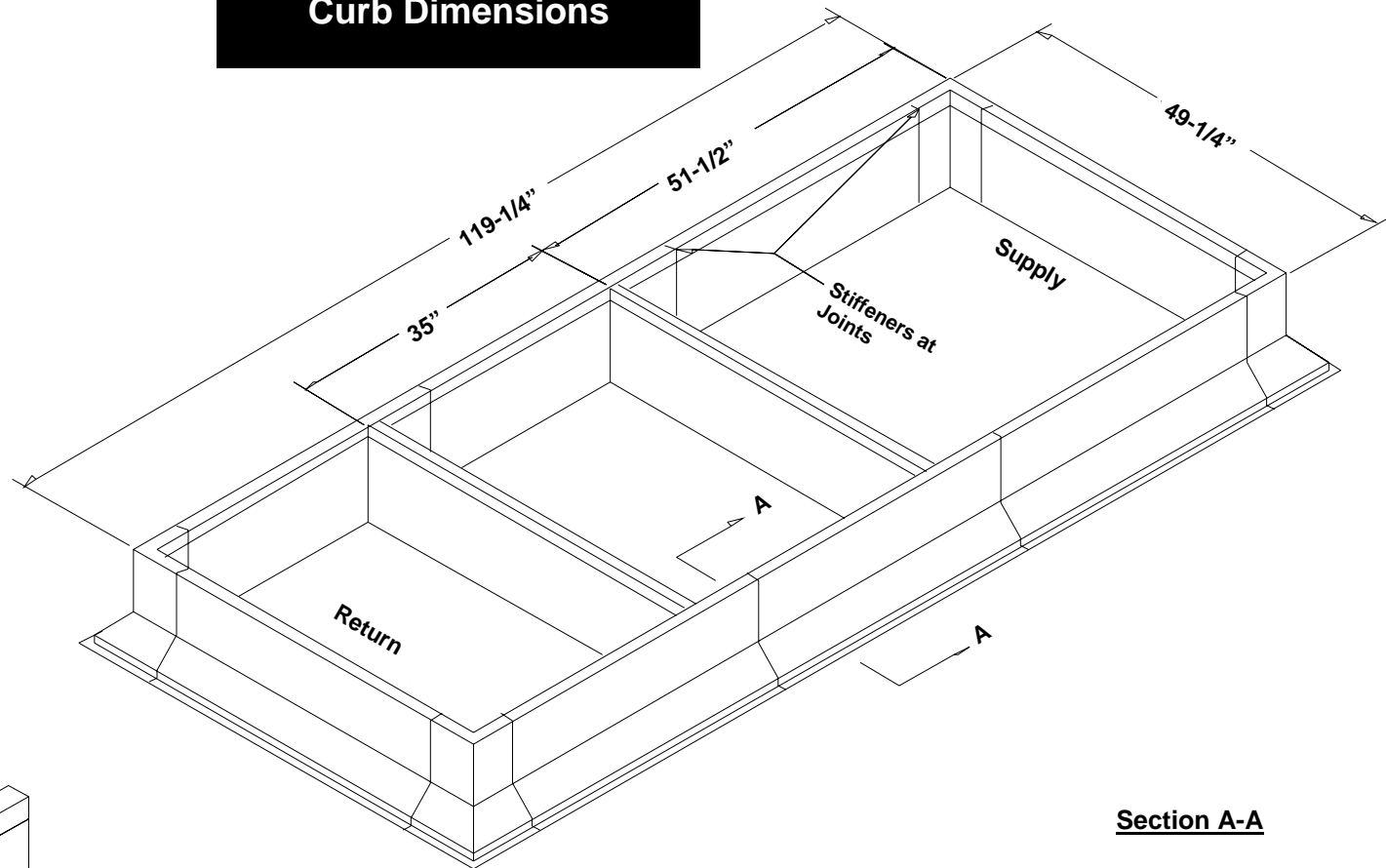
- NOTES:**
- Bottom Supply is standard—Optional end supply location is also shown
  - Side Ventilation is standard
  - Drawings are not to scale
  - Drawings and dimensions are subject to change without notice
  - Use “J” Dimension for piping as a “rough in” dimension. Actual pipe locations vary

DIMENSIONS: STANDARD UNIT								
A	B	C	D	E	H	J	K	M
R	S	T	U	V	X	AA	BB	CC
124"	54"	50"	19 <sup>7</sup> / <sub>8</sub> "	17 <sup>7</sup> / <sub>8</sub> "	42 <sup>1</sup> / <sub>8</sub> "	74"	9 <sup>1</sup> / <sub>8</sub> "	14 <sup>1</sup> / <sub>2</sub> "
43 <sup>7</sup> / <sub>8</sub> "	17 <sup>7</sup> / <sub>8</sub> "	5 <sup>1</sup> / <sub>8</sub> "	4 <sup>5</sup> / <sub>8</sub> "	5 <sup>1</sup> / <sub>2</sub> "	9 <sup>1</sup> / <sub>4</sub> "	44"	18"	13 <sup>1</sup> / <sub>2</sub> "

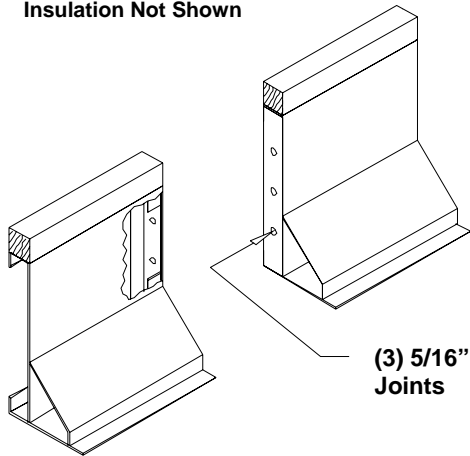


# MODEL AR-0121

## Curb Dimensions



**Typical Detail**  
Insulation Not Shown



**(3) 5/16" Bolts at Joints**

**NOTE:**

Vital Air Technologies Reserves the Right to Modify Curb Dimensions Without Notice to Facilitate Engineering Design Improvements.

**Section A-A**

