



# Aqua-Tec

## INDOOR POOL DEHUMIDIFIERS

### MODEL AR-0081

#### STANDARD FEATURES

##### Performance:

- ◆ Moisture Removal: 45.5#/hr @ 82°F, 60% RH
- ◆ CFM: 3,400 CFM @ 0.5"ESP
- ◆ Ventilation Air Opening for 1,020 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 Air 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-0081

		AIRFLOW (CFM)			FILTERS	
		Supply	Return	O/A	QTY	Size (in)
Base Unit R-22 (lbs)	Weight (lbs)	3,400	2,380	1,020	(4)	20" x 20" x 2"
29.0	1,770	3,400	3,400	0		
		Max.				
		Min.				

## 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 (lbs/hr)	SENSIBLE COOLING (btuh)	TOTAL COOLING (btuh)	TOTAL HEAT OF REJECTION (btuh)
78° F / 50% RH	29.9	67,000	98,600	
78° F / 60% RH	40.6	59,800	102,500	
80° F / 50% RH	31.7	67,100	100,700	
80° F / 60% RH	43.0	59,600	104,800	
82° F / 50% RH	33.6	67,200	102,800	
82° F / 60% RH	45.5	59,300	107,000	131,800
84° F / 50% RH	35.5	67,300	104,900	
84° F / 60% RH	47.9	59,000	109,300	
86° F / 50% RH	37.4	67,400	107,000	
86° F / 60% RH	50.3	58,800	111,600	

### MOISTURE REMOVAL & SPACE COOLING

POOL HEATING	
Heat Cap. (btuh)	44,700
Water Flow (gpm)	7.0
Pressure Drop (ft)	9.2
Connections (in)	1.0 FPT

SPACE HEATING	
Heat Cap. (btuh)	141,400
Water Flow (gpm)	14.0
Pressure Drop (ft)	1.3
Connections (in)	1.0 FPT
Ent. Water Temp.	180° F



## SPECIFICATIONS: HEAT REJECTION CONDENSER PERFORMANCE

MAX. AMBIENT	MODEL	CONNECTIONS (in)		UNIT WEIGHT (LBS)	R-22 ADDER (lbs)	
		HOT GAS	LIQUID		50' RUN	100' RUN
95° F	B-2210	7/8"	7/8"	350	36.0	52.0
100° F	B-2310	7/8"	7/8"	370	46.0	61.0
105° F	B-3310	7/8"	7/8"	560	62.0	78.0

### AIR-COOLED CONDENSER

Water-Cooled CONDENSER	
THR (btuh)	131,800
Water Flow (gpm)	26.0
Pressure Drop (ft)	13.4
Connections (in)	1 1/4 FPT
R-22 Adder (lbs)	0



## SPECIFICATIONS: ELECTRICAL PERFORMANCE

	0.5" ESP			1.0" ESP			
	VOLTAGE/PH/Hz	230/3/60*	460/3/60	575/3/60	230/3/60*	460/3/60	575/3/60
Blower (HP)		2	2	2	3	3	3
Blower (FLA)		5.6	2.8	2.2	8.7	4.0	3.2
Compressor (HP)		8.0	8.0	8.0	8.0	8.0	8.0
Compressor (FLA)		32.1	16.4	12.0	32.1	16.4	12.0
Compressor (LRA)		195	95	80	195	95	80
Min. Circuit Amps		45.7	23.3	17.2	48.8	24.5	18.2
Max. Overload Protection Device (Amps)		70	35	25	80	40	30
Unit Min. Wire Size (75° Insulation CU)		# 8	# 10	# 12	# 8	# 10	# 10
Max. Unit Total KW Input		9.1	9.1	9.0	10.1	9.9	9.9
Control Voltage		24	24	24	24	24	24

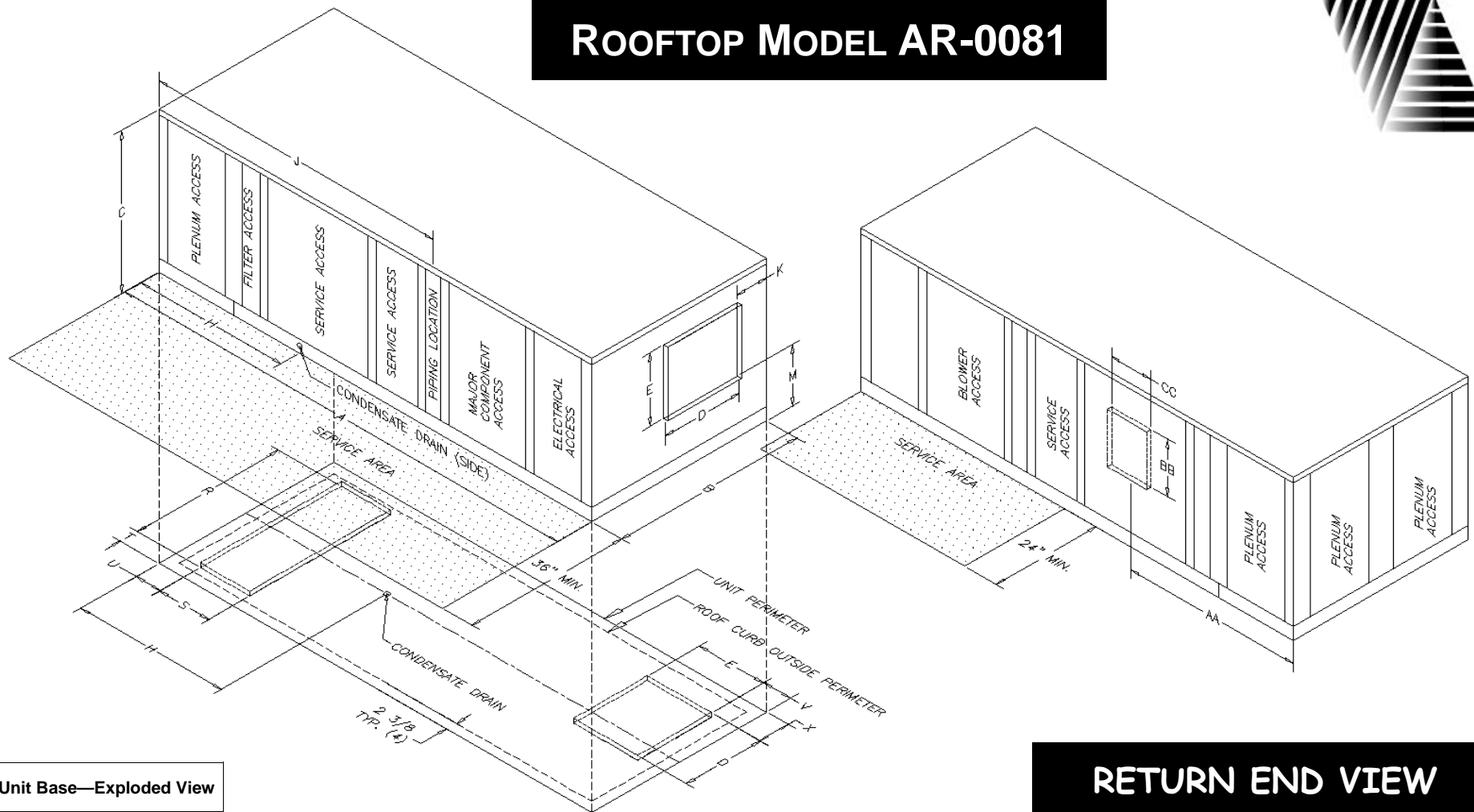
### ELECTRICAL

\* 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-0081



Unit Base—Exploded View

RETURN END VIEW

SUPPLY END VIEW

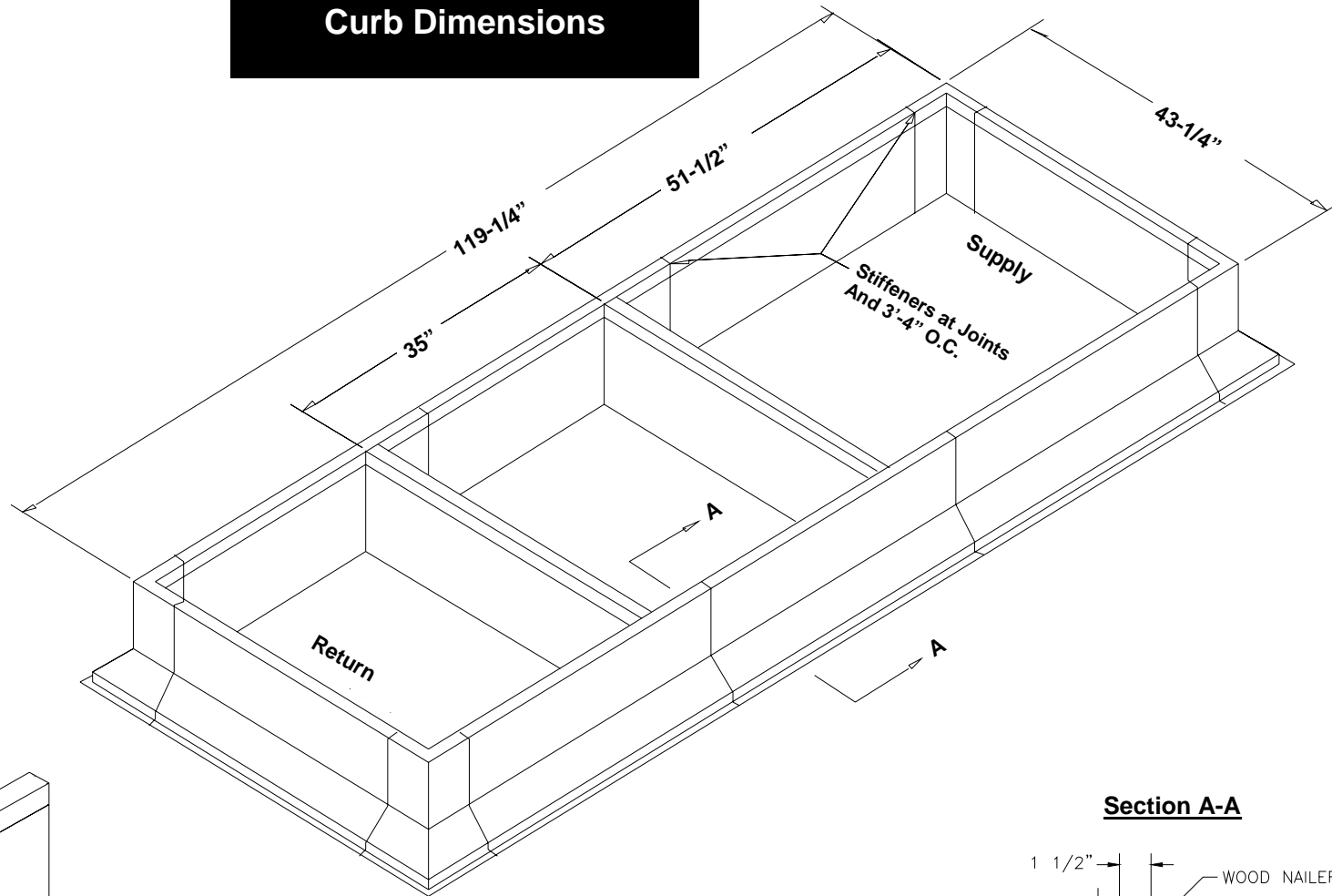
- NOTES:**
- Bottom Supply is standard—Optional end supply location is also shown
  - Side Ventilation is standard
  - Drawings are not to scale
  - Drawings and dimensions are subject to change without notice
  - Use "J" Dimension for piping as a "rough in" dimension. Actual pipe locations vary

DIMENSIONS: STANDARD UNIT								
A	B	C	D	E	H	J	K	M
124"	48"	48"	16- <sup>7</sup> / <sub>8</sub> "	14- <sup>7</sup> / <sub>8</sub> "	42- <sup>1</sup> / <sub>8</sub> "	74"	9- <sup>5</sup> / <sub>8</sub> "	13- <sup>1</sup> / <sub>4</sub> "
R	S	T	U	V	X	AA	BB	CC
37- <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> "	6- <sup>5</sup> / <sub>8</sub> "	10- <sup>1</sup> / <sub>4</sub> "	45"	18"	13- <sup>1</sup> / <sub>2</sub> "



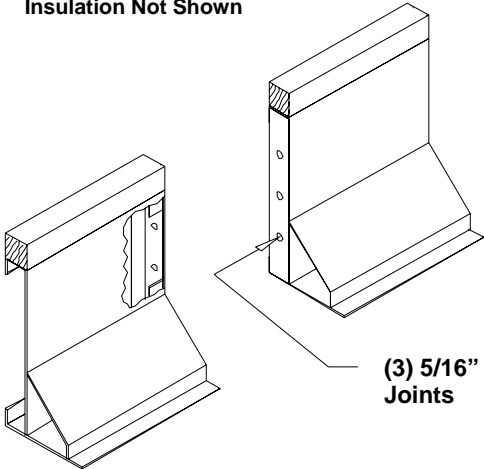
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## Curb Dimensions



### 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

