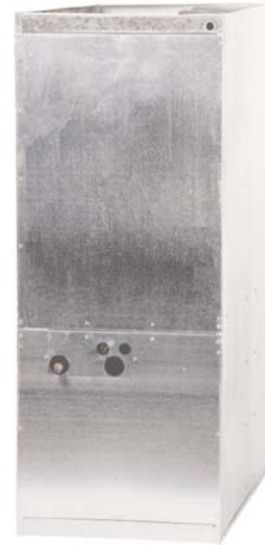


## AR COMMERCIAL SERIES

### Electric Split System Cooling and Heat Pump Air Handler



*The AR Commercial electric split system cooling and heat pump air handler offers installation for upflow or horizontal positions in an indoor application.*

#### Standard Features

- Upflow or horizontal (left side) installation positions in 7½- and 10-ton cooling-only or heat pump applications
- 10-ton model is circuited for use with two (2) 4- or 5-ton or one (1) 10-ton outdoor cooling-only or heat pump systems
- All models are convertible to 460-3-60 from 208/230-3-60
- Blower relay and transformer
- TXV control; 7½-ton unit has one (1) thermal expansion check valve; 10-ton unit has two (2) thermal expansion check valves
- Draw-thru centrifugal blower is belt-driven for quiet, efficient operation
- Horizontal and vertical condensate pans
- Copper tube, aluminum fin coils
- Entry on top of panel for both low- and high-voltage
- Built-in filter rack (2" filter included)

#### Cabinet Construction

- Heavy-gauge, reinforced, G-90 galvanized-steel cabinet
- Fully insulated with fiberglass blanket
- Removable access panels make servicing of unit faster and easier

#### Accessories

- 15, 20 and 30 kW Electric Heater Kits

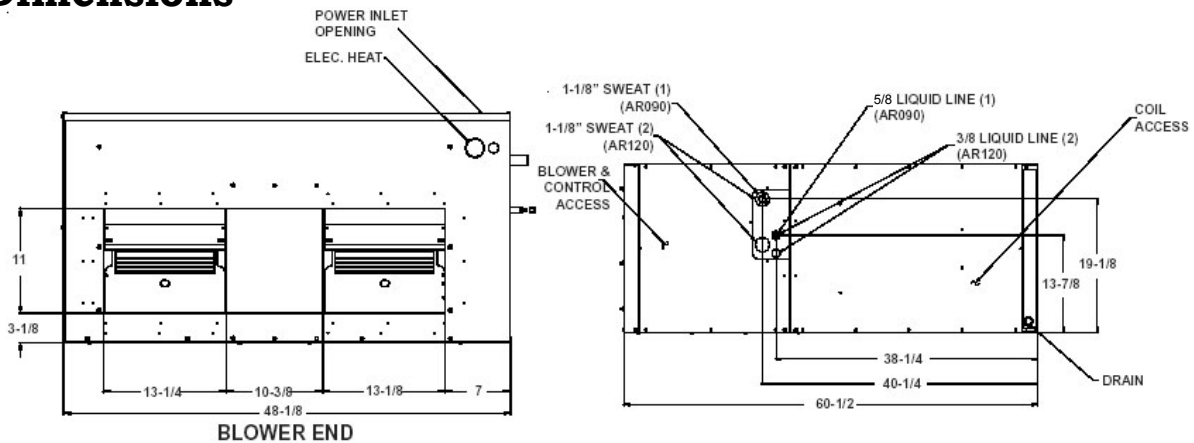


# PRODUCT SPECIFICATIONS

## Specifications

	AR090	AR120
<b>Electrical</b>		
Unit volts	208/240/460	208/240/460
Phase	3	3
Hertz	60	60
Voltage Range	187 - 253 / 414-506	187 - 253 / 414-506
FLA (Total)	5.2	6
Minimum Circuit Ampacity	6.5 / 3.3	7.5 / 3.8
<b>Blower Motor Type</b>		
Type	Belt Drive	Belt Drive
Horse Power	1½	2
Volts	208/230/460	208/230/460
Phase	3	3
Hertz	60	60
FLA	5.2	6
LRA	35	32
<b>Blower &amp; Controls</b>		
Wheel Dia. & Width (Qty.)	11 x 10 (2)	11 x 10 (2)
Pulley Pitch Dia.	5.9	6.5
Bore	1	1
Motor Pulley Pitch Dia.	1.9 to 2.9	2.8 to 3.8
Bore	5/8	5/8
Belt Length & Width	39 x ½	41 x ½
Nominal Airflow (Ft./Min.)	3,000	4,000
Transformer (60 VAC.)	Standard	Standard
Blower Relay	Standard	Standard
<b>Filter, Coil &amp; Refrigerant</b>		
Filter Size (Disposable) / Qty	16 x 20 x 2 (4)	16 x 20 x 2 (2) 20 x 20 x 2 (2)
Coil Area (sq. ft.)	9	10
FPI - Rows	14 - 4	14 - 4
Metering Device (Qty.)	Expansion Valve (1)	Expansion Valve (2)
Refrigerant	R-22	R-22
Liquid Connection (Qty.)	5/8	3/8 (2)
Suction Connection (Qty.)	1-1/8	1-1/8 (2)
Condensate Drain	¾ FPT	¾ FPT

## Dimensions



MODEL	A	B
AR090	15-5/8"	16-3/16"
AR120	18-5/8"	14-11/16"

**NOTE:**

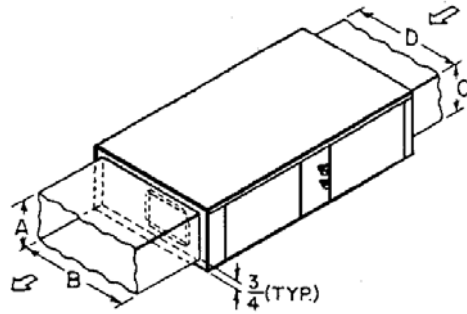
AR090 (1) 5/8 Liquid Line  
 AR120 (2) 3/8 Liquid Line

## Duct Connection Sizing Without Electric Heaters

### Minimum Supply and Return Duct Dimensions

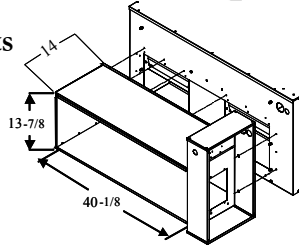
Supply Duct		Return Duct	
A	B	C	D
13 1/8"	40"	48"	24"

\*Dimensions in Inches



### Dimensional Data Electric Heater Kits

- 15, 20 & 30 kW Electric Heater Kits
- Supply opening is 13-17/8 x 40-1/8



## Electric Heater Kits

AHKD Model Number	Nominal kW	Electrical Characteristics	Stages	Weight (lbs.)	Max. Overcurrent Protection
AHKD15-3	15	208-230/3/60	1	56	60
AHKD15-4	15	460/3/60	1	55	30
AHKD20-3	20	208-230/3/60	2	59	70
AHKD20-4	20	460/3/60	2	57	35
AHKD30-3	30	208-230/3/60	2	60	100
AHKD30-4	30	460/3/60	2	58	50

\* AR Series Air handlers do not have factory-installed electric heat. Purchased as an accessory, the above heater kits are the ONLY heater kits that can be used with the AR Series.

NOTE: The electrical characteristics of the air handler, electric heater kits, and building power supply must be compatible.

## Temperature Rise (Degrees °F)

Model	Heat Kit kW	CFM	Supply Voltage		
			208	240	480
AR090	15	2,800	14	19	19
		2,900	14	18	18
		3,000	13	18	18
		3,100	13	17	17
		3,200	12	17	17
	20	2,800	19	25	25
		2,900	18	24	24
		3,000	18	24	24
		3,100	17	23	23
		3,200	17	22	22
	30	2,800	28	38	38
		2,900	27	37	37
		3,000	27	35	35
		3,100	26	34	34
		3,200	25	33	33

Model	Heat Kit kW	CFM	Supply Voltage		
			208	240	480
AR120	15	3,800	10	14	14
		3,900	10	14	14
		4,000	10	13	13
		4,100	10	13	13
		4,200	9	13	13
	20	3,800	14	19	19
		3,900	14	18	18
		4,000	13	18	18
		4,100	13	17	17
		4,200	13	17	17
	30	3,800	21	28	28
		3,900	20	27	27
		4,000	20	27	27
		4,100	19	26	26
		4,200	19	25	25

\*Table above is calculated with both stages of electric heat engaged (2 stage heat systems). Divide the temperature rise from the table by 2 for 1st stage operation for systems using staged electric heat.

## PRODUCT SPECIFICATIONS

### A090 Air Delivery\*

Static Pressure	Motor Sheave Turns Open			
	1	2	3	4
0.1	4,264	3,930	3,633	3,273
0.2	3,996	3,705	3,235	2,998
0.3	3,731	3,379	3,002	2,517
0.4	3,445	3,066	2,613	
0.5	3,113	2,662		

\* With dry coil and 2" air filter

### AR120 Delivery\*

Static Pressure	Motor Sheave Turns Open					
	0	1	2	3	4	5
0.1	5,193	5,037	4,790	4,529	4,097	4,097
0.2	5,012	4,873	4,603	4,315	3,842	3,842
0.3	4,852	4,675	4,393	4,091	3,589	3,589
0.4	4,687	4,484	4,172	3,853	3,295	3,073
0.5	4,501	4,268	3,939	3,561	2,922	2,610
0.6	4,293	4,041	3,673	3,223	2,642	
0.7	4,073	3,782	3,347	2,892		
0.8	3,807	3,485	2,962			
0.9	3,540	3,117				

\* With dry coil and 2" air filter

Note: Any adjustment made to the blower should not cause the motor to draw more than the motors rated RLA.

Note: Applications that exceed the above could require a larger motor.

## Filters

Model	Filter Size
AR090	16" x 20" x 2"
AR120	16" x 20" x 2" 20" x 20" x 2"

