



Air Conditioning & Heating

AC50 COMMERCIAL AIR HANDLER

NOMINAL CAPACITY:
90,000 TO 120,000 BTU/H
[26.40 kW TO 35.30 kW]

50 Hz, 7½- AND 10-TON

Standard Features

- Thermal expansion valve (1) A90, (2) A120
- Dual circuitry on A120 for use with a 10-ton unit or two 5-ton condensing units
- Built-in horizontal and vertical oversized condensate pan to ensure proper drainage
- Built-in filter rack
- Low-voltage and high-voltage entry on front panel
- Transformer, blower relay, and interlock relay are standard on every unit
- Copper tube, aluminum fin coil
- Belt-driven, low-noise, draw-through centrifugal blower for quiet, efficient operation

Cabinet Features

- Heavy-gauge, galvanized steel with removable access panels; properly reinforced and braced
- Cabinet fully insulated with fiberglass blankets
- Insulation is supplied in sufficient thickness (1") and density to prevent condensate from forming on the unit casing
- Weather-resistant, baked-on powder epoxy paint finish with 500-hour salt spray approval

Accessories

- Room Thermostat (CHT90-120)



SPECIFICATIONS

	AC90-00-2	AC120-00-5F
ELECTRICAL		
Unit Volts-Phase	240-1	380-415-3
Voltage Range	198 - 264	342-435
FLA (Total)	10.6	3.3
Ampacity (Wire Sizing)	11.75	4.2
Blower Motor Type	CAP.START	3-Phase
HP	1½	2
BLOWER AND CONTROLS		
Blower Wheel Diameter and Width	12" x 12"	(2) 11" x 10"
Blower Pulley Pitch Diameter	5½"	6"
Bore	3/4	1.0
Motor Pulley Pitch Diameter	1.9" to 2.9"	3.4" to 4.4"
Bore	¾"	⅞"
Belt Length and Width	49" x ½"	41" x ½"
Nominal Airflow (feet per minute)	3,000	4,000
Transformer (60 Vac.)	Standard	Standard
Interlock Relay	Standard	Standard
Blower Relay	Standard	Standard
FILTER, COIL AND REFRIGERANT		
Filter, Replaceable	32" x 47" x 1"	(2) 16" x 20" x 2" (2) 20" x 20" x 2"
Coil Area (ft²)	8.02	10
Rows-fins Per Inch	2-13	4-14
Metering Device	Expansion valve	(2) Expansion valve
Liquid Connection	⅜"	(2) ⅜"
Suction Connection	1½"	(2) 1½"
Condensate Drain	¾" FPT	¾" FPT

PERFORMANCE DATA

AC90 AIR DELIVERY*

AIRFLOW (FT ³ /MIN)	EXTERNAL STATIC PRESSURE (INCH WATER COLUMN)						
	.1	.2	.3	.4	.5	.6	.7
	FAN RPM	FAN RPM	FAN RPM	FAN RPM	FAN RPM	FAN RPM	FAN RPM
2,800	--	--	800	830	850	880	945
2,900	--	775	795	845	860	898	990
3,000	--	800	830	850	880	930	1,010
3,100	790	830	848	865	895	960	1,020
3,200	810	840	850	880	930	1,000	1,030
3,300	850	890	880	895	965	1,020	1,060

* with dry coil and air filter

AC120 AIR DELIVERY*

AIR DELIVERY CFM (FT ³ /MIN)	MOTOR SHEAVE, TURNS OPEN					
STATIC PRESSURE (INCHES OF WATER)	0	1	2	3	4	5
0.2	4,845	4,530	4,280	4,264	4,000	3,750
0.3	4,773	4,430	4,127	4,087	3,830	3,600
0.4	4,608	4,280	3,944	3,879	3,780	3,390
0.5	4,451	4,075	3,779	3,700	3,565	3,137
0.6	4,235	3,886	3,580	3,506	3,325	2,850
0.7	4,060	3,680	3,392	3,274	3,058	2,570
0.8	3,850	3,477	3,163	3,024	2,700	---
0.9	3,685	3,271	2,942	2,665	---	---
1	3,420	3,043	2,523	2,349	---	---

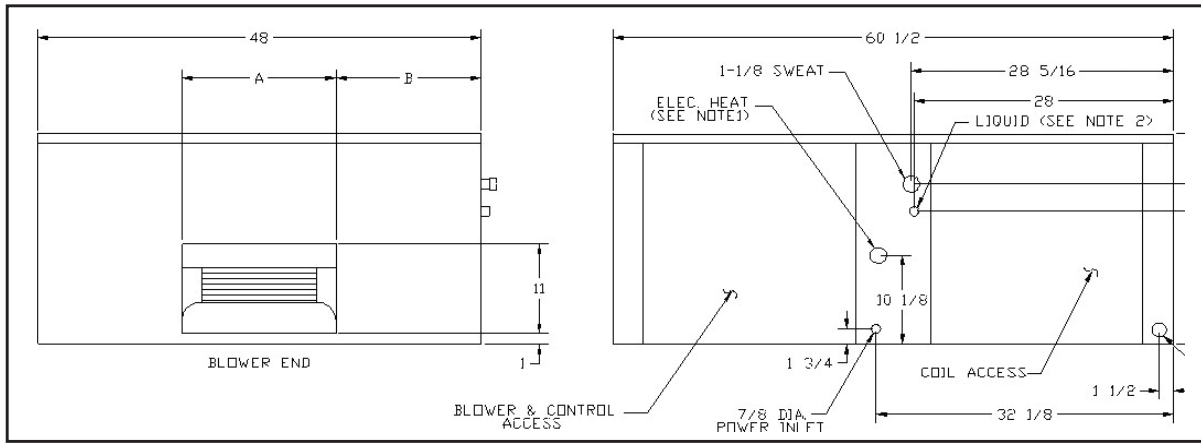
* with dry coil and air filter

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

Applications that exceed the above could require a larger motor.

DIMENSIONS

MODEL AC90

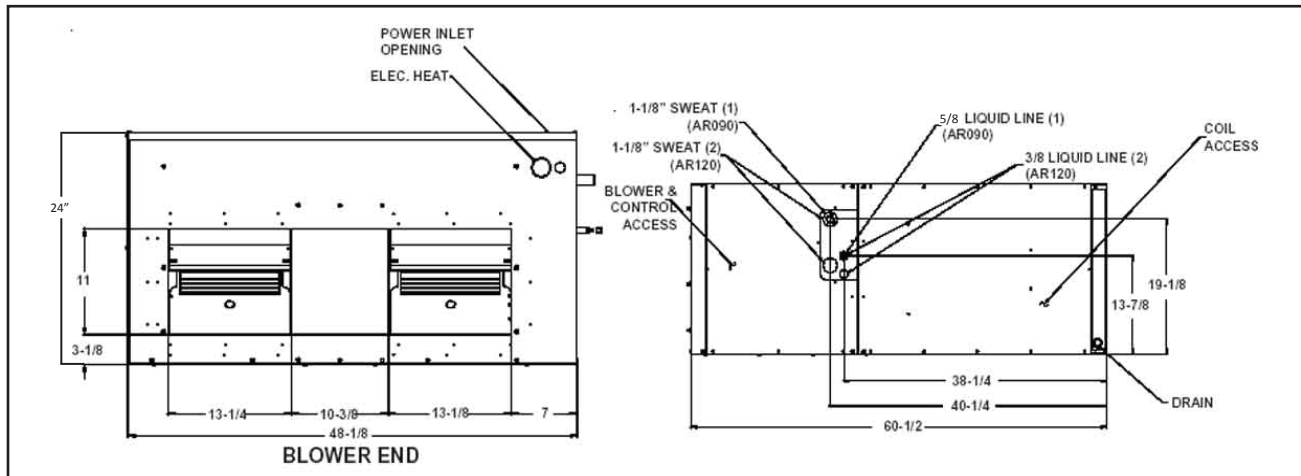


MODEL	A	B
AC90	15 5/8"	16 5/8"
SHIPPING WEIGHT — LBS (KG)		
AC90-00-2	342 (155.3)	

NOTES:

- Concentric knockouts at 2, 1 1/4, 1 3/8
- AC90-00, (1) 1/2 liquid line

MODEL AC120

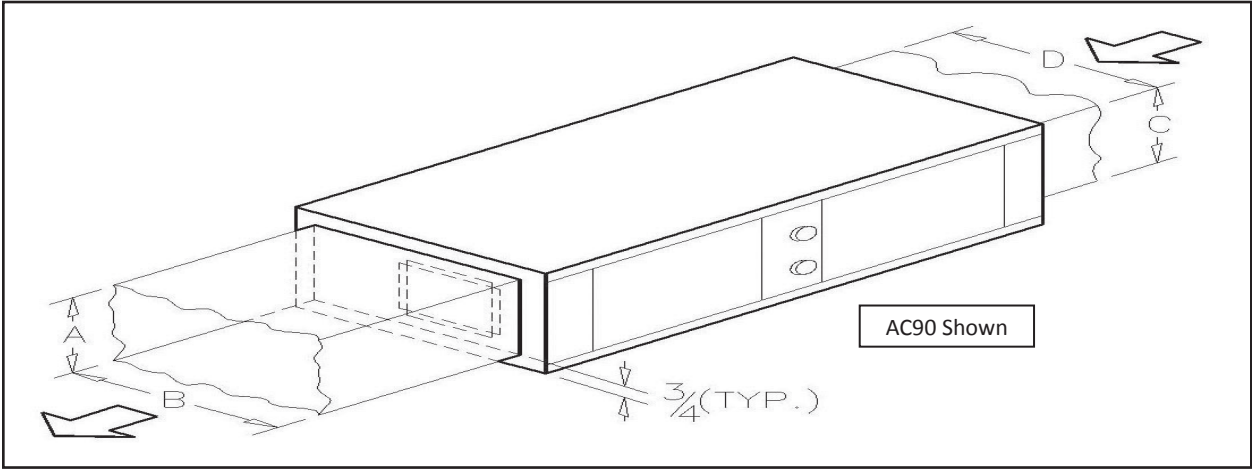


Shipping Weight — lbs (kg)	
AC120-00-5F	430 (195)

NOTES:

- Concentric knockouts at 2, 1 1/4, 1 3/8
- A120-00, (2) 3/8 liquid line

DUCT CONNECTION SIZING



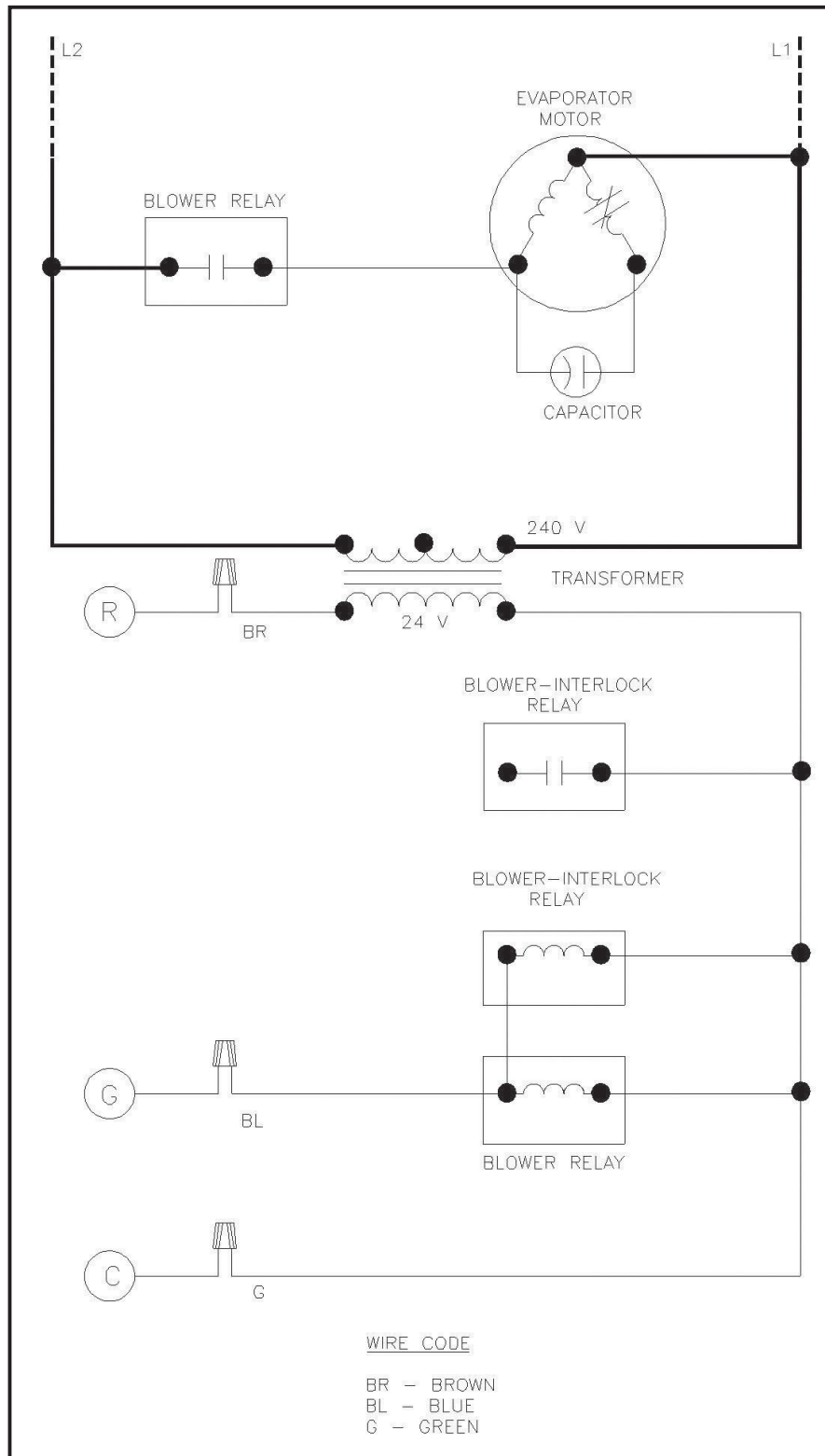
RECOMMENDED* MINIMUM SUPPLY AND RETURN DUCT DIMENSIONS

FAN COIL SIZE	SUPPLY DUCT		RETURN DUCT	
	A	B	C	D
AC90	11 1/2"	34"	22 1/2"	46 1/2"
AC120-00-5F	13 1/8"	40"	24"	48"

Note: It is the installation technicians responsibility to size the duct work for each application.

SCHEMATIC WIRING DIAGRAM

MODEL AC90



NOTES

