

# Compressed Air Cooling Air AA Series

## COPPER TUBE CONSTRUCTION

### Performance Notes

- Full line of sizes and features
- Energy efficient
- High performance
- Medium flows 80-300 CFM
- Horizontal air flow
- Floor or suspended mounting
- Wired for single point external connection
- Detachable legs (shipped unattached)



## Ratings

### Maximum Operating Pressure

250 PSI

### Maximum Operating Temperature

350°F

## Materials

**Cabinet** Galvanized steel

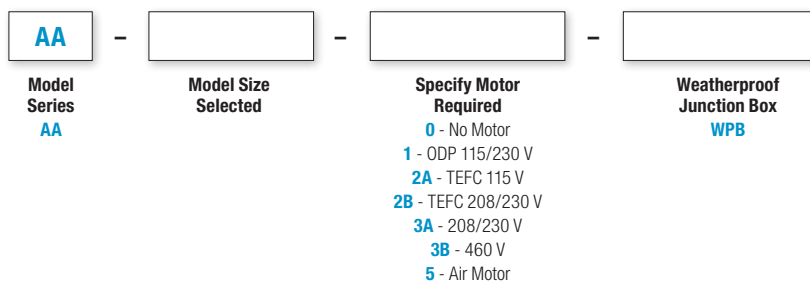
**Core** Aluminum fins on copper tubes

**Fan** Heavy gauge aluminum with steel hub

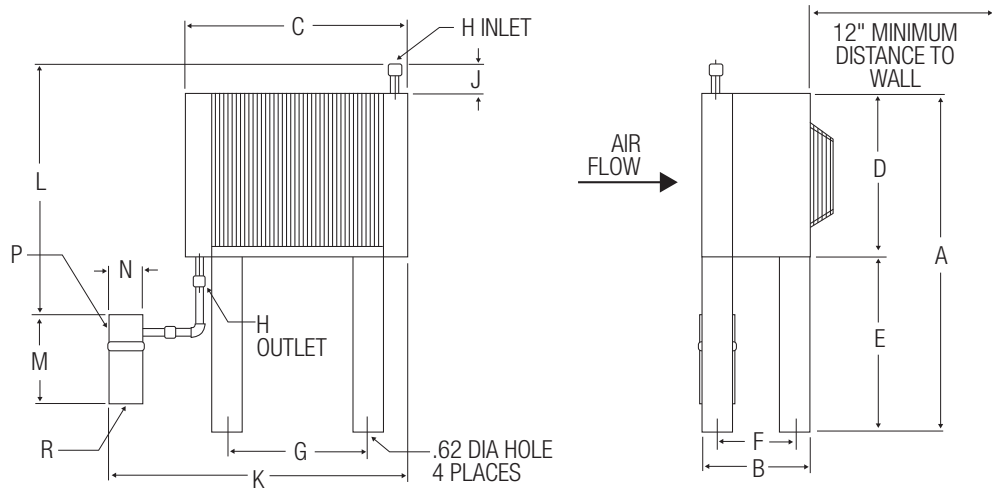
**Motor** Open vented

**Fan Guard** Steel with baked enamel finish

## How to Order



# Dimensions



Model	A	B	C	D Approx.	E	F	G	H NPT	J	K* Approx.	L* Approx.	Optional Separator				Recommended Optional Separator Model Number
												M	N	NPT	R	
AA-50	46.50	14.75	30.50	22.50	24.00	10.75	19.00	1.00	4.00	41.12	34.50	10.00	4.62	1	1/4	S-100M or AD
AA-80	46.50	14.75	30.50	22.50	24.00	10.75	19.00	1.50	4.00	41.12	35.00	10.00	4.62	1	1/4	S-100M or AD
AA-120	46.50	14.75	43.50	22.50	24.00	10.75	32.00	1.50	4.00	54.20	37.10	12.10	4.70	1	1/4	S-200M
AA-150	46.50	14.75	43.50	22.50	24.00	10.75	32.00	1.50	4.00	54.20	36.60	12.10	4.70	1	1/4	S-200M
AA-240	49.50	14.75	47.63	25.50	24.00	10.75	32.00	2.00	4.00	58.33	40.60	12.10	4.70	1½	1/4	S-300M
AA-300	55.50	14.75	51.68	31.50	24.00	10.75	36.00	2.00	4.00	62.38	49.60	12.10	4.70	1½	1/4	S-300M

Note: We reserve the right to make reasonable design changes without notice. All dimensions are in inches.

## Capacity Selection Chart Max. SCFM @ 5, 10, 15 and 20°F Approach

Inlet Temp. °F	150				200				250				300				350				Recommended Optional Separator Model Number
	Approach Temp. °F	5	10	15	20	5	10	15	20	5	10	15	20	5	10	15	20	5	10	15	
AA-50	34	58	79	99	25	43	59	74	21	36	50	62	18	31	42	52	16	27	38	47	S-100M or AD
AA-80	50	87	119	150	40	69	94	117	34	59	80	100	30	52	71	89	28	47	65	82	S-100M or AD
AA-120	81	138	190	235	61	105	142	177	51	87	120	150	43	75	102	127	40	69	94	116	S-200M
AA-150	92	160	220	270	73	125	172	215	63	110	150	187	55	95	130	160	50	86	120	148	S-200M
AA-240	160	275	380	425*	120	207	285	355	100	175	240	300	84	145	204	250	78	135	185	231	S-300M
AA-300	184	318	440	480*	145	250	345	430	125	217	300	375	110	190	257	320	100	175	240	300	S-300M

Above specifications are based on 80 to 125 PSIG operating pressures.

Maximum pressure drop, less than 3 psi. A flexible metal hose must be properly installed between the compressor and aftercooler to validate warranty.

\*Maximum ratings restricted by pressure drop, actual thermal capacities are higher.

## Electric Motor & Fan Data

Model	CFM	Motor HP	Standard Motor (ODP)		Optional Motor (TEFC)		Optional Motor (TEFC)*		Optional Air Motor		Approximate Shipping Weight (LBS)
			Voltage	Full Load AMPS/Motort	Voltage	Full Load AMPS/Motort	Voltage	Full Load AMPS/Motort	PSI <sup>1</sup>	CFM <sup>2</sup>	
AA-50	1375	1/4	115/1/60	7.2	115/208 230/1/60	5/2.6-2.5	208/230 460/3/60	1.4-1.3/65	50	13	110
AA-80	1375	1/4	115/1/60	7.2		5/2.6-2.5		1.4-1.3/65	50	13	120
AA-120	2450	1/4	115/1/60	7.2		5/2.6-2.5		1.4-1.3/65	50	13	140
AA-150	2350	1/4	115/1/60	7.2		5/2.6-2.5		1.4-1.3/65	50	13	145
AA-240	4600	1/4 <sup>2</sup>	115/1/60	7.2		5/2.6-2.5		1.4-1.3/65	50	13	200
AA-300	4700	1/4 <sup>2</sup>	115/1/60	7.2		5/2.6-2.5		1.4-1.3/65	50	13	300

Standard Motor(s) = 1600 RPM, Custom Frame, Equipped with Thermal Overload. Optional Motor(s) = 1725 RPM, Nema 48 Frame, No Thermal Overload.

Published electrical ratings are approximate, and may vary because of motor brand. Actual ratings are on motor nameplate.

**\*3 phase motors available in 50Hz. Reduce performance by 10%**

<sup>1</sup>Air inlet to motor must be regulated to this pressure.

<sup>2</sup>CFM (Free Air) consumption of the air motor. Lubrication = one drop of oil for every 50-75 CFM of air going through the motor. Use detergent SAE #10 oil. Filter, regulator and lubricators for the air motors are required, but not included.

## General Information

1. Air cooled aftercoolers are built for operation with maximum air pressure of 250 PSI and temperature of 350°F.
2. The motors furnished are built for fan duty. Consideration should be given to the installation location so motors **are not subjected to extreme temperatures.**
3. Air cooled aftercoolers are generally installed at floor level. If the unit is to be used to reclaim waste heat for space heating, it is recommended that the unit be mounted 7 to 14 feet above the floor, depending on the structure, for proper heat distribution.

## Installation

1. Air cooled aftercoolers are designed for mounting either by mounting legs, or by suspension from brackets attached to the cabinet. (Hanger rod not included.)
2. Aftercoolers should **not** be located in corrosive atmospheres as rapid deterioration of casing, cooling coil, fan and motor may take place resulting in reduced life.
3. Piping should be sized based on air flow and pressure drop requirements and not on the aftercooler's supply and return connection size. The piping must also be properly supported to prevent manifold stress.
4. A strainer located ahead of the aftercooler should be installed to trap scale, dirt or sludge that may be present in piping and equipment, or that may accumulate with use.
5. A separator/trap/drain should be installed in the outlet piping of the aftercooler to remove condensate. Condensate could damage the cooler if condensate is allowed to freeze.
6. Flexible connectors should be installed to prevent the stressing of manifolds. (Must be properly installed to validate warranty.)
7. Arrange the outlet pipe so that the moisture that condenses within the aftercooler can drain freely by gravity.
8. For proper air flow, a minimum of 12" clearance should be allowed between the aftercooler fan and any wall or obstructions.

## Electrical

1. **CAUTION To prevent possible electrical shock, it is important to properly ground this unit using grounding screw provided. Be sure not to disconnect the motor grounding wire when making this connection.**
2. Connect motor only to a power supply of the same characteristics as shown on the motor nameplate. Be sure to provide proper fusing to prevent possible motor burnout. Before starting motor, follow manufacturer's recommendations. Turn fan manually to eliminate possible motor burnout in the event the fan has been damaged in shipment. Observe operation after motor is started for the first time.
3. In a typical compressor aftercooler installation, the aftercooler is interlocked to the compressor so it runs whenever the compressor is turned on.

## Maintenance

Inspect the unit regularly for loose bolts and connections, rust and corrosion, and dirty or clogged heat transfer surfaces (cooling coil).

## Heat Transfer Surface

Dirt and dust should be removed by brushing the fins and tubes and blowing loose dirt off with an air hose. Should the surface be greasy, the motor should be removed and the fins and tubes brushed or sprayed with a non-flammable degreasing fluid. Follow with a hot water rinse and dry thoroughly. A steam hose may also be used effectively.

## Casing, Fan and Motor

Dirt and grease should be removed from these parts. Rusty or corroded surfaces should be sanded clean and repainted.

## Internal Cleaning

Once a year piping should be disconnected and a degreasing agent or flushing oil circulated through the unit to remove sludge from turbulators and internal tube surfaces to return the unit to full capacity. A thorough cleaning of the entire system in the same manner is preferable to avoid carry-over from uncleaned piping, pump and accessories. The strainer of any filtering devices should be removed and serviced following this cleaning operation. **Caustic cleaners should not be used to clean these heat exchangers.**

## Motor

Keep outside surface free of dirt and grease so motor will cool properly. Make sure cooling air over motor is not obstructed. Sleeve bearing motors are normally furnished and require lubrication every 6 months. Add a few drops of SAE 20 oil to each bearing. When TEFC Motors are furnished, they are normally prelubricated ball bearing motors and require no grease for about 5 to 10 years.

## Repair or Replacement of Parts

When ordering replacement parts or making inquiry regarding service, mention model number, serial number and the original purchase order number. Any reference to the motor must carry full nameplate data.