POWERED AIRE Inc.
AIRE CURTAINS
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v5.0.1

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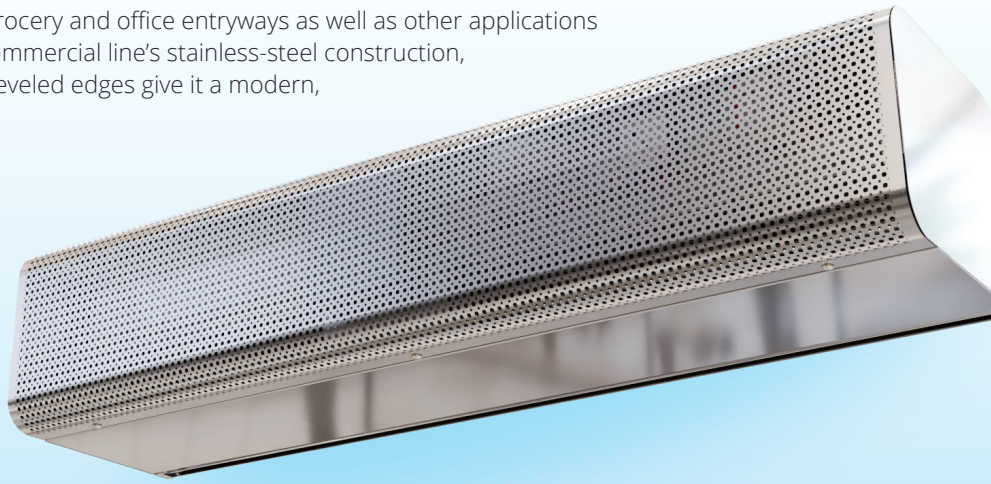
ETA-E

ETA-E

May 2020
PAAC-204

The ETA-E electrically heated air curtain provides a heated option of the ETA. This air curtain has been tested in accordance with ANSI/AMCA 220 and meets the criteria to be used as an exception to vestibules. The ETA-E provides electric heat from its blower, helping to create a warmer interior climate and enhanced comfort for workers/customers. The unit is designed for all retail, grocery and office entryways as well as other applications that typically would require a vestibule. This commercial line's stainless-steel construction, stainless-steel intake screen, and 45-degree beveled edges give it a modern, aesthetically pleasing look.



OPTIONS

HEATING

Unheated . . . . . .pg 9
Hot Water . . . . . .pg 17
Steam . . . . . .pg 17

FILTER

½" Cleanable

AT A GLANCE

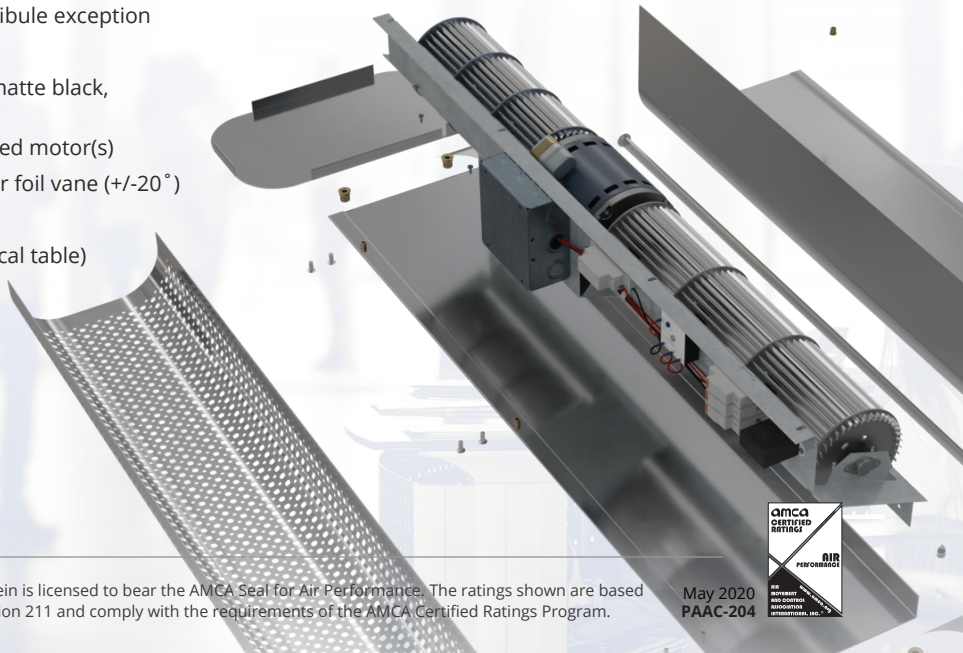
Single Incremental Widths	Max Installation Height	Heavy Duty Motors
3' to 14'	14'	¾ HP

KEY DESIGN FEATURES

- Meets ASHRAE 90.1 and IECC requirements for vestibule exception
- AMCA tested performance
- Outer cabinet available in brushed stainless steel, matte black, or gloss white
- 3/4 HP ODP (Open Drip Proof) direct-drive dual-speed motor(s)
- High-efficiency discharge plenum with adjustable air foil vane (+/-20˚)
- Factory mounted single-stage electric heaters
- Single point power connection available (see electrical table)
- Alternate heater kW available (consult factory)

RECOMMENDED CONTROLS & ACCESSORIES

- Activation by 24V magnetic door switch
- Toggle disconnect switch
- SmartTouch Pro controller
- Filter (washable)



Powered Aire Inc. certifies that the Model ETA-E Air Curtain shown herein is licensed to bear the AMCA Seal for Air Performance. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

May 2020
PAAC-204

ETA-E | PERFORMANCE

ETA-E | Performance Table

MODEL	Nozzle Width (in.)	Max FPM at Nozzle	Avg. Outlet Velocity (FPM)	Airflow Rate (CFM)	Outlet Velocity Uniformity	Power Rating (kW)	Number of Motors	Motor HP	Weight (lbs)
ETA-1-36E	36	5654	1845	1310	82%	0.68	1	3/4	95
ETA-1-42E	42	5321	1903	1503	83%	0.71	1	3/4	102
ETA-1-48E	48	5296	1514	1438	85%	0.72	1	3/4	109
ETA-1-60E	60	5288	1343	1665	79%	0.78	1	3/4	121
ETA-2-72E	72	5654	1845	2620	82%	1.36	2	3/4	177
ETA-2-84E	84	5321	1903	3006	83%	1.42	2	3/4	195
ETA-2-96E	96	5296	1514	2876	85%	1.44	2	3/4	210
ETA-3-108E	108	5654	1845	3930	82%	2.04	3	3/4	255
ETA-3-120E	118	5340	1886	4316	82%	2.1	3	3/4	284
ETA-3-132E	133	5305	1617	4285	79%	2.14	3	3/4	301
ETA-4-144E	145	5654	1845	5240	82%	2.72	4	3/4	354
ETA-4-156E	157	5648	1876	5626	82%	2.78	4	3/4	372
ETA-4-168E	169	5321	1903	6012	83%	2.84	4	3/4	390

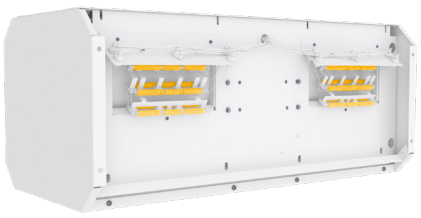
! **For a unit over 14 feet long, or a non-standard electric heater, consult factory.**

ETA-E | Velocity Projection Model

DISTANCE FROM NOZZLE	40"	80"	120"	160"	200"
ETA-1-36-E Core Velocity (fpm)	1133	1033	733	566	366

ETA-E | Sound Levels

Measured 10 ft. from unit in a free field based on a 1 motor unit	63 dBA



Performance Highlight

Heating elements are mounted inside the plenum, on the discharge side of the blowers. Here, heat won't affect motor life and the heaters are protected from dust that would accumulate on them if they were mounted on the air intake.

The AMCA Certified Ratings Seal applies to airflow rate, average outlet velocity, outlet velocity uniformity, velocity projection and power rating at free delivery only. Rated data shown are based on tests of units with heating elements present but not in use.

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ETA-E | ELECTRICAL

AMP Draw, Circuits & Breaker Size Table
ALL AMP DRAWS LISTED BELOW INCLUDE TOTAL DRAW (MOTOR AND HEATERS INCLUDED)
*** Single Point Power (SPP) includes branch fusing and may require remote control panel.**
‡ High amp draws may be prohibitive. Reduced and custom kW available. Contact factory.
▶ Orange arrow denotes recommended kW.

Models	AMP DRAW (Breaker Size)							
	kW	Temp Rise (˚F)	208 / 1 / 60			240 / 1 / 60		
			Circuit 1	Circuit 2	SPP	Circuit 1	Circuit 2	SPP
ETA-1-36E / 42E / 48E / 60E	14.0	27	-	-	-	32.8A (45)	29.2A (40)	61.9A (80)
	12.0	23	-	-	-	28.6A (40)	25.0A (35)	53.6A (70)
	▶ 10.0	19	27.6A (35)	24.0A (35)	51.7A (70)	45.3A (60)	-	-
ETA-2-72E / 84E / 96E	28.0	30	-	-	-	‡	‡	‡
	24.0	25	-	-	-	‡	‡	‡
	▶ 20.0	21	‡	‡	‡	‡	‡	‡
ETA-3-108E / 120E / 132E	42.0	31	-	-	-	‡	‡	‡
	36.0	27	-	-	-	‡	‡	‡
	▶ 30.0	22	‡	‡	‡	‡	‡	‡
ETA-4-144E / 156E / 168E	56.0	30	-	-	-	‡	‡	‡
	48.0	25	-	-	-	‡	‡	‡
	▶ 40.0	21	‡	‡	‡	‡	‡	‡

Models	AMP DRAW (Breaker Size)							
	kW	Temp Rise (˚F)	208 / 3 / 60			240 / 3 / 60		
			Circuit 1	Circuit 2	SPP	Circuit 1	Circuit 2	SPP
ETA-1-36E / 42E / 48E / 60E	14.0	27	42.5A (60)	-	-	37.3A (50)	-	-
	12.0	23	36.9A (50)	-	-	32.5A (45)	-	-
	▶ 10.0	19	31.4A (40)	-	-	27.7A (35)	-	-
ETA-2-72E / 84E / 96E	28.0	30	46.1A (60)	38.9A (50)	84.9A (110)	40.9A (60)	33.7A (45)	74.6A (100)
	24.0	25	40.5A (60)	33.3A (45)	73.8A (100)	36.1A (50)	28.9A (40)	64.9A (90)
	▶ 20.0	21	35.0A (45)	27.8A (35)	62.7A (80)	31.3A (40)	24.1A (35)	55.3A (70)
ETA-3-108E / 120E / 132E	42.0	31	‡	‡	‡	‡	‡	‡
	36.0	27	‡	‡	‡	‡	‡	‡
	▶ 30.0	22	‡	‡	‡	46.9A (60)	36.1A (50)	83.0A (110)
ETA-4-144E / 156E / 168E	56.0	30	‡	‡	‡	‡	‡	‡
	48.0	25	‡	‡	‡	‡	‡	‡
	▶ 40.0	21	‡	‡	‡	‡	‡	‡

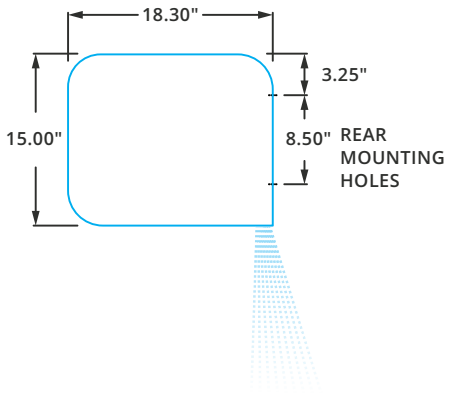
Models	AMP DRAW (Breaker Size)					
	kW	Temp Rise (˚F)	480 / 3 / 60			575 / 3 / 60
			Circuit 1	Circuit 2	SPP	Circuit
ETA-1-36E / 42E / 48E / 60E	14.0	27	18.8A (25)	-	-	-
	12.0	23	16.4A (25)	-	-	-
	▶ 10.0	19	14.0A (20)	-	-	11.5A (15)
ETA-2-72E / 84E / 96E	28.0	30	37.7A (50)	-	-	-
	24.0	25	32.9A (45)	-	-	-
	▶ 20.0	21	28.1A (40)	-	-	23.1A (30)
ETA-3-108E / 120E / 132E	42.0	31	31.3A (40)	25.3A (35)	56.5A (80)	-
	36.0	27	27.7A (35)	21.7A (30)	49.3A (70)	40.6A (60)
	▶ 30.0	22	42.1A (60)	-	-	34.6A (45)
ETA-4-144E / 156E / 168E	56.0	30	41.7A (60)	33.7A (45)	75.4A (100)	-
	48.0	25	36.9A (50)	28.9A (40)	65.7A (90)	-
	▶ 40.0	21	32.1A (45)	24.1A (35)	56.1A (80)	46.2A (60)

ETA & ETA-E | MECHANICAL DETAILS & DRAWINGS

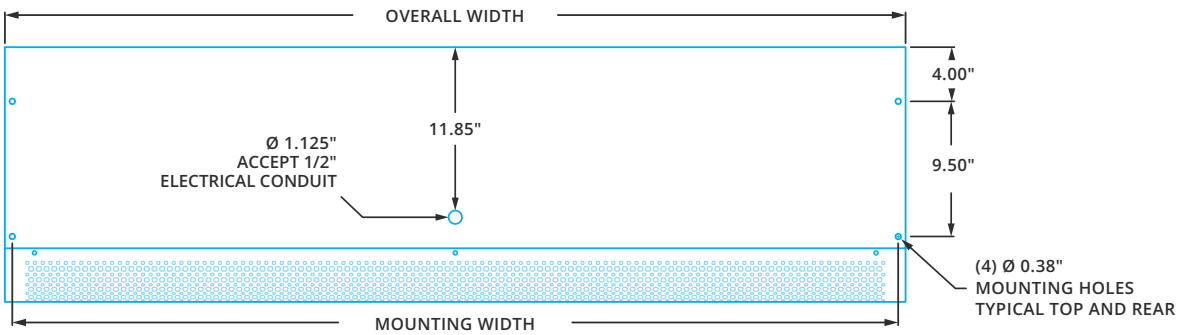
ETA & ETA-E | Mechanical Information Table

MODEL	Overall Width (in.)	Nozzle Width (in.)	Mounting Width (in.)
ETA-1-36 (E)	37	36	36.06
ETA-1-42 (E)	43	42	42.06
ETA-1-48 (E)	49	48	48.06
ETA-1-60 (E)	61	60	60.06
ETA-2-72 (E)	73	72	72.06
ETA-2-84 (E)	85	84	84.06
ETA-2-96 (E)	97	96	96.06
ETA-3-108 (E)	109	108	108.06
ETA-3-120 (E)	119	118	118.06
ETA-3-132 (E)	134	133	133.06
ETA-4-144 (E)	146	145	145.06
ETA-4-156 (E)	158	157	157.06
ETA-4-168 (E)	170	169	169.06

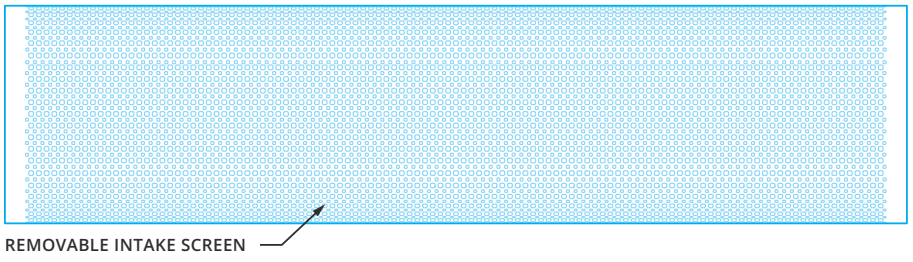
SIDE



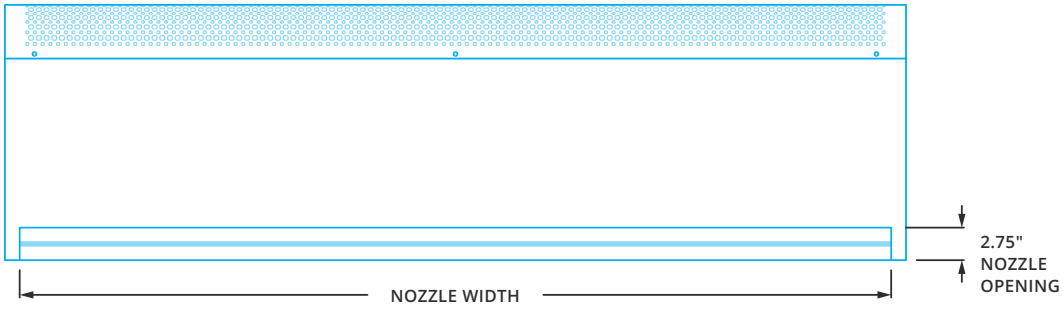
TOP



FRONT



BOTTOM



ETA & ETA-E | INSTALLATION

! IMPORTANT

- **NOTE:** The air curtain should be mounted as close to the door header/opening as possible for maximum performance. For every one inch the bottom of the air curtain is mounted above the door header, the back side of the air curtain should be moved away from the wall ¼ inch.
- Trained and experienced mechanic / electrician required.
- **WARNING:** Risk of electrical shock, can cause injury or death: Disconnect all remote electrical supplies before servicing.
- Units must be field wired in accordance with all applicable local, state, provincial and national codes, including wire size and materials.
- All hardware and brackets must be of sufficient strength to safely support air curtain.

A TOP MOUNT

Unit has four 3/8 – 16 threaded inserts for installing one end of threaded rods. The other ends of the threaded rods can be attached to the ceiling. Threaded rod should not extend more than 3/4 inch into air curtain.

B WALL MOUNT

Back side of air curtain has 4 mounting holes capable of accepting four 3/8 mounting bolts or lags, with washers (use these holes only for mounting). Mark and pre-drill mounting surface accurately. A long extension and ratchet will negate the need to remove the motor/blower plate when installing. Mounting bolts or lags of sufficient size and strength should be installed and tightened through the four slots in motor/blower plate.

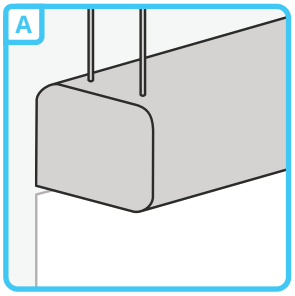
If motor/blower plate has to be removed, the junction box inside the unit must be removed along with any electrical switches that may be in the way. Remove 7/16 whizlock nuts holding plate in place, and slide plate out, rotating top portion of plate so it comes out first. Remember when installing plate to put bottom of plate in first and push and rotate top in last.

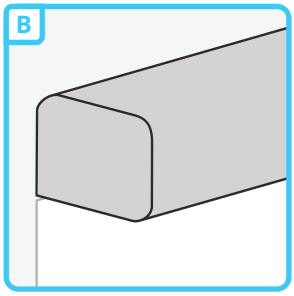
C EXTENSION BRACKETS (WALL MOUNT)

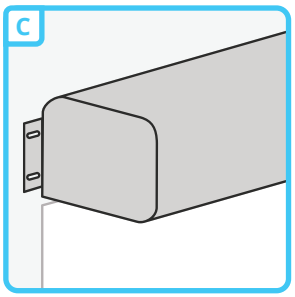
Extension brackets bolt on to the back of the unit, utilizing the 4 original mounting holes, and allowing for external mounting of unit to wall. Brackets have elongated mounting slots that extend the mounting width by 2½ to 3½ inches.

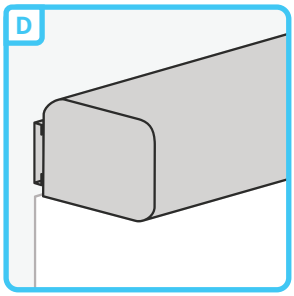
D MB123 BRACKETS

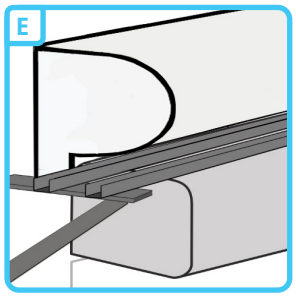
Universal mounting slots are used to lag the bracket to the wall (bolts by others). 3/8" mounting bolts (supplied) are threaded into the holes located in all four corners of the back side of the air curtain, leaving 1/2" of the bolts exposed.

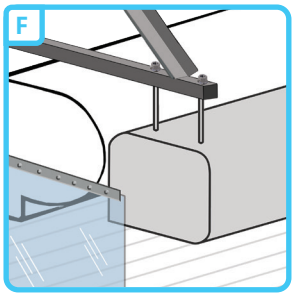












MOUNTING AROUND CANISTER DOORS

There are multiple options for mounting around canister and roll up doors. Angle brackets, Unistrut, and threaded rod (*not shown*) can be used to mount the Air Curtain **E** below the canister.

F When mounting in front of the canister, it is recommended to utilize side baffles to create a seal that prevents outside air from entering. To maximize effectiveness, the barrier should extend to the floor.