ABSOLUTAIRE

The AA-Series

AbsolutAire's Direct Gas Fired Heating & Ventilating Systems

Simplicity, economy and application versatility have made Direct Gas Fired Heating and Ventilating Systems the fastest growing choice for meeting both make-up air needs and space-heating requirements.

AbsolutAire's AA-Series offers an outstanding choice of models, with airflow capacities from 800 to 54,000 CFM and heating capacities from 200 to 6,000 MBH. Numerous standard and optional features deliver a wide range of attractive user benefits, including exceptional design flexibility.

An industry-leading Two-Year Parts and 90-Day Labor Limited Warranty underscores a strong commitment to quality. All AA-Series models are available with ETL Certification to current ANSI Design Standards.

In make-up air applications, the AA-Series insures a balanced ventilation system. Variable Volume models can provide precise make-up air to meet changing exhaust requirements, improving both air quality and worker comfort.

These direct gas fired systems, fueled with either natural gas or propane (LP) gas, provide a constant source of comfortable, tempered fresh air. Units are available using either 100-percent outside air or a more economical blend of 20-percent outside air with 80-percent return air.

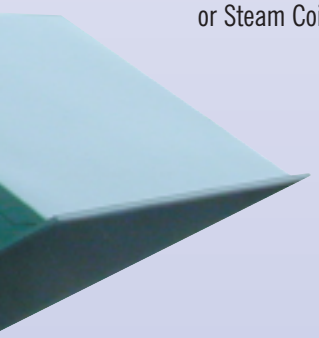
In heating applications, the AA-Series provides an economical, high-efficiency space heating system. The 99.9-percent BTU-efficient burner system, combined with air recirculation, insures that direct gas fired heating systems are considerably less costly to operate than other heating systems.

With its wide range of airflow and heating capacities, many options and accessories including a choice of controls, and quick-ship availability, AbsolutAire's AA-Series is suited for a diverse array of applications in both new and retrofit construction.

Smaller units are routinely chosen for restaurant kitchen make-up air. Larger units are regularly specified for various commercial and industrial heating and ventilating needs. A Spray and Bake model is especially designed for increasing productivity in today's advanced paint finishing systems. Other model options include evaporative cooling, heating and cooling coils, and high-efficiency filtering.

AA-Series Advantages

- Economical, Standardized Simplicity
- Value-Added Pricing and Fast Delivery
- Multiple Sizes Meet Precise Needs
  - Airflow Capacities from 800 to 54,000 CFM
  - Heating Capacities from 200 to 6,000 MBH
- Application Versatility Indoors or Out
- High Efficiency with Natural or LP Gas
- Piped and Wired for Quick Installation
- Exclusive Two-Year Parts and 90-Day Labor Limited Warranty
- ETL Certification to ANSI Design Standards:
  - ANSI Z83.18a-2001 for 80/20 Outside/Return Air Models
  - ANSI Z83.4a-2001 and CSA 3.7a-2001 for Constant 100% or Variable Outside Air Models
  - ANSI Z83.4a-2001 for Occupied Spray Mode and UL 795 for Unoccupied Bake Mode in Spray & Bake Applications
  - UL 1995 for Models with Fluid or Steam Coils



Key Information

The AA-Series

Direct-Fired Draw-Through Design

AbsolutAire's AA-Series is designed as a "draw-through" heating and ventilating system. The burner combustion zone is located close to the intake/return air plenums, ahead of the blower-fan discharge plenum, allowing various discharge configurations without the use of ductwork. Uniform airflow across the burner insures maximum fuel efficiency as well as constant air-delivery volume. With the combustion taking place before the supply fan, the air-delivery system can compensate for volume expansion as the air is heated.

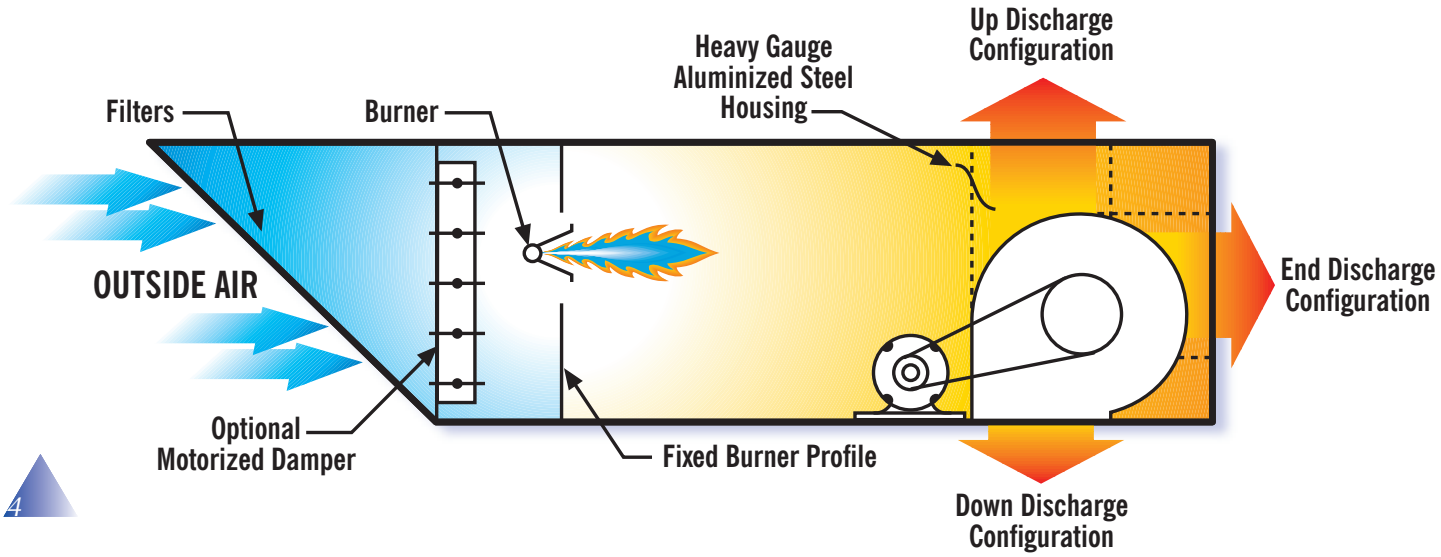
Other types of make-up air systems push air through the burner. These "blow-through" units have certain disadvantages in efficiency. When the fan inlet temperature varies, the fan brake horsepower requirements will change. The blow-through designs will deliver constant air volume, but only if the discharge temperature is constant. If the discharge air temperature varies, the air volume will vary. This can possibly disrupt the balance of exhaust air and make-up air.

AA-Series units are complete in every aspect, with all necessary gas and electrical controls included. Attractive standard features as well as numerous options and accessories insure maximum design flexibility and application versatility. With ventilation airflow rates up to 54,000 CFM and firing rates up to 6,000,000 BTU/HR,* the various model choices have become extremely popular over the years.

*Refer to the Model Selection tables for individual model performance.

Pure and Simple:

AbsolutAire's AA Series is the ideal solution for meeting make-up air requirements, as well as for meeting many high-efficiency heating and ventilating needs.



Design Flexibility, Application Versatility

Standard Features

- Horizontal or Upright Cabinets
- Choice of Discharge Configurations
- Weather-Resistant, Heavy-Gauge Aluminized Steel Construction
- Designed to ANSI Standards
- 30:1 Burner Turndown Capability
- Maxitrol Series 14 Discharge Temperature Controls with Temp. Dial at the Unit (on AA1700 through AA3 Models)
- Maxitrol Series 14 Discharge Temperature Controls with Remote Temp. Dial (on AA4 and Larger Models)
- Multiple Access Doors (Drop-Out and/or Hinged)
- Durable Two-Coat Paint Finish (Owner-Matched Colors at No Extra Cost)
- Factory Piped and Wired
- Control Circuit Fusing
- Automatic Gas Modulation
- High- and Low-Temp. Limit Switches
- Flame Safeguard Controls with Remote Flame Reset
- U.V. Flame Detection (> 1/2" gas inlet)
- Non-Fused Disconnect Switch (Except on AA1700)
- Low Fire Start
- Motor Starter and Overload Protection
- Low Airflow Switch
- Fan Bearings Rated to a Minimum of 100,000 Hours (L-10 Life)
- Remote Control Panel (Meets NEMA 1,2, and 5 requirements)
- Main Electrical Panel (Meets NEMA 1, 2, 3, 3R, 3S, 4, 5 and 12 requirements)
- 100% Factory Testing

Optional Features

- ETL Certification to ANSI Design Standards
- FM or IRI Manifolds
- Maxitrol Series 14 Discharge Temperature Controls with Remote Temp. Dial (for AA1700 through AA3 Models)
- Maxitrol Series 44 Space Temperature Controls with Remote Thermostat (Standard on "F" Model Option.)
- DFM Space Temperature Controls with Digital Display and Built-In Time Clock (Standard on "M" and "B" Model Options.)
- Inlet Hoods or Plenums for Horizontal Models
- Cabinet Legs or Plenums for Upright Models
- Insulated Cabinet
- Double-Wall Construction
- Multiple Filtering Choices
- Motorized Inlet or Discharge Dampers
- Full or Duct Curb, Flat or Pitched
- Fused Disconnect Switch
- Vibration Isolation (Internal or External)
- Motor Belt Guards
- Service Platforms
- Three- and Four-Way Discharge Diffusers with Single- or Double-Deflection for Airflow Control
- 80/20 Variable, Two-Position or Fixed, Return Air Models
- Evaporative Cooling Packages
- Cooling Sections with Chilled Water or DX Coils
- Heating Sections with Hot Water, Steam or Electric Coils
- Spray and Bake Paint Finishing Configurations
- Specialty Finishes

Model Selection and Performance

Table 1: Static Pressure Drops for Base Cabinets[1]

Model Option[2]	Inches W.C.
O or V (100% OA, Fixed or Variable)	0.80
M (80/20 Modulating)[3]	0.95
B (80/20 Two-Position)[3]	0.85
F (80/20 Fixed)	0.85

NOTES:

1. Data applies to Horizontal and Upright Models. Add 0.10 to total static pressure on all units with G12 or smaller blower.
2. Base cabinet static pressure drops are calculated using 25ºF entering air temperature and 90ºF exiting air temperature. Static pressure drops for filter sections, inlet hoods and other options/accessories must be added.
3. Includes static pressure drops for dampers.
4. This includes the initial static pressure drop of "clean" filters.
5. Consult factory for exact coil losses in the application.

Important: On units with a filter option, the filters should be changed when the pressure drop reaches 0.60" w.c. Consult factory for change recommendations on high-efficiency filtering options.

Total Static Pressure Drop: After adding the losses from the base cabinet and options/accessories, also add project-specific ductwork losses. These will be user provided.

Table 2: Static Pressure Drops for Options/Accessories

Option/Accessory Description	Inches W.C.
Inlet Hood with Birdscreen	0.05
Filtered Inlet Hood (Includes 1" Aluminum Mesh Filters)[4]	0.10
Motorized Inlet Damper	0.10
Motorized Discharge Damper	0.18
3-Way Single-Deflection Diffuser Head	0.25
3-Way Double-Deflection Diffuser Head	0.35
4-Way Single-Deflection Diffuser Head	0.20
4-Way Double-Deflection Diffuser Head	0.25
Side Access Filter Section (2" 30% Pleated)[4]	0.35
Side Access Filter Section (1" Aluminum Mesh)[4]	0.20
Filter/Mix Box (2" 30% Pleated)[4]	0.35
Filter/Mix Box (1" Aluminum Mesh)[4]	0.20
ADD for 2" Aluminum Mesh Filters on Above Options	0.05
Evaporative Cooling Section (with 6" Thick Media)	0.15
Evaporative Cooling Section (with 12" Thick Media)	0.30
Typical CW or DX Coil Box[5]	0.60 – 0.90
Typical Steam Or HW Coil Box[5]	0.30 – 0.40

Maximum MBH Capacities[1]

Model	100% Outside Air Models[2]		Return Air Models[3]	
	Natural Gas	LP Gas	Natural Gas	LP Gas
AA1700	235	185	Not Available	Not Available
AA3000	375	330	330	315
AA1	450	375	375	355
AA2	940	720	720	690
AA3	1,125	1,050	1,050	1,010
AA4	2,025	1,550	1,550	1,485
AA5	2,800	2,215	2,215	2,125
AA6	3,615	2,770	2,770	2,655
AA7	4,900	3,880	3,880	3,720
AA8	6,000	5,545	5,545	5,315

NOTES:

1. Maximum MBH Capacities listed are based on a unit operating at 750-feet elevation and an outside air (OA) temperature of -10°F.
2. On 100% Outside Air (OA) models, selections are limited to the lesser of the Maximum MBH shown or a temperature rise of 140°F for natural gas or 100°F for propane (LP) gas.
3. On Return Air (RA) models, selections are limited to the lesser of the Maximum MBH shown or a temperature rise of 100°F for natural gas or 95°F for propane (LP) gas.

Gas Manifold Sizing

Gas Manifold Size	Maximum Capacity (MBH)	Min. Pressure Required at Max. MBH (inches w.c.)[(1)]	Maximum Inlet Gas Pressure
1/2"[(2)]	290	8	14"
3/4"	625	9	14"
1"	1,200	13	1#
1-1/4"	2,100	14	5#
1-1/2"	2,700	17	5#
2"	6,000	22	5#

(1) 3" less with low-pressure burners (NP2).

(2) Direct ignition only.

NOTES:

For low-inlet-gas-pressure options, consult factory.

1-1/4" and larger manifolds can provide higher MBH capacities if the available gas pressure is higher than the minimum required pressure shown. Consult factory.

Model Selection, Fan and Motor Requirements

Unit CFM	Model	Fan and Motor Requirements @ Total Static Pressure Shown												Outlet Velocity (FPM)
		1.00"		1.25"		1.50"		1.75"		2.00"		2.50"		
		FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	
800	AA1700	10-4	0.30	10-4	0.35	10-4	0.41	10-4	0.47	10-4	0.55	CF		1,509
1,250		10-4	0.59	10-4	0.66	10-4	0.74	10-4	0.83	10-4	0.91	10-4	1.11	2,358
1,700		9-7	0.80	9-7	0.88	9-7	0.97	10-4	1.36	10-4	1.47	10-4	1.69	2,615
1,900		10-8	0.73	9-7	1.10	9-7	1.20	9-7	1.30	10-4	1.79	10-4	2.06	2,346
2,200		10-8	0.95	10-8	1.09	10-8	1.21	10-8	1.32	10-8	1.44	10-8	1.70	2,716
2,000	AA3000	10-8	0.81	10-8	0.91	10-8	1.05	10-8	1.15	10-8	1.27	10-8	1.50	2,469
2,500		10	1.05	10	1.17	10	1.30	10	1.43	10	1.58	10	1.86	2,451
3,000		10	1.43	10	1.62	10	1.77	10	1.92	10	2.12	10	2.43	2,941
3,500		10	2.06	10	2.23	10	2.41	10	2.57	10	2.74	10 HD	3.18	3,431
3,500	AA1	12	1.38	12	1.58	12	1.75	12	1.93	12	2.16	12	2.54	2,431
4,500		15	1.66	15-11	2.18	15-11	2.40	15-11	2.63	15-11	2.86	15-11	3.42	2,239
5,500		15	2.42	15	2.68	15	2.96	15	3.33	15	3.63	15	4.24	2,736
4,500	AA2	15	1.66	15-11	2.18	15-11	2.40	15-11	2.63	15-11	2.86	15-11	3.42	2,239
5,500		15	2.42	15	2.68	15	2.96	15	3.33	15	3.63	15	4.24	2,736
6,500		15	3.51	15	3.78	15	4.08	15	4.39	15	4.72	15	5.50	3,234
8,000		15	5.80	15	6.07	15	6.38	15	6.71	15	7.06	15 HD	7.93	3,980
6,000	AA3	15	2.88	15	3.24	15	3.53	15	3.83	15	4.14	15	4.78	2,985
7,150		18	2.87	18	3.35	18	3.74	18	4.13	18	4.53	18	5.46	2,491
8,300		18	3.83	18	4.30	18	4.74	18	5.30	18	5.75	18	6.67	2,892
9,500		18	5.13	18	5.63	18	6.14	18	6.64	18	7.15	18	8.30	3,310
10,000	AA4	20 HD	3.90	20 HD	4.36	20 HD	4.85	20 HD	5.47	20 HD	5.99	20 HD	7.10	2,381
12,000		20 HD	5.69	20 HD	6.22	20 HD	6.77	20 HD	7.33	20 HD	8.02	20 HD	9.22	2,857
14,000		20 HD	8.04	20 HD	8.65	20 HD	9.27	20 HD	9.89	20 HD	10.71	20 HD	12.02	3,333
13,000	AA5	22 HD	5.65	22 HD	6.28	22 HD	6.93	22 HD	7.73	22 HD	8.44	22 HD	9.92	2,549
15,000		22 HD	7.67	22 HD	8.36	22 HD	9.07	22 HD	9.80	22 HD	10.75	22 HD	12.34	2,941
17,000		22 HD	10.27	22 HD	11.02	22 HD	11.79	22 HD	12.58	22 HD	13.40	22 HD	15.30	3,333
20,000		22 HD	14.98	22 HD	16.03	22 HD	16.89	22 HD	17.77	22 HD	18.68	CF	CF	3,922
18,000	AA6	25 HD	7.19	25 HD	8.12	25 HD	8.97	25 HD	9.86	25 HD	10.96	25 HD	12.89	2,683
20,000		25 HD	9.00	25 HD	9.88	25 HD	10.98	25 HD	11.92	25 HD	12.88	25 HD	14.90	2,981
22,000		25 HD	11.19	25 HD	12.15	25 HD	13.12	25 HD	14.12	25 HD	15.35	25 HD	17.46	3,279
24,000		25 HD	13.51	25 HD	14.57	25 HD	15.88	25 HD	16.88	25 HD	17.97	25 HD	20.38	3,577
26,000		25 HD	16.30	25 HD	17.49	25 HD	18.65	25 HD	19.81	25 HD	21.16	25 HD	23.51	3,875
26,000	AA7	30 HD	10.27	30 HD	11.39	30 HD	12.55	30 HD	13.76	30 HD	15.23	30 HD	17.88	2,796
30,000		30 HD	13.71	30 HD	14.98	30 HD	16.47	30 HD	17.78	30 HD	19.13	30 HD	22.13	3,226
35,000		30 HD	19.39	30 HD	21.08	30 HD	22.57	30 HD	24.06	30 HD	25.74	30 HD	28.81	3,763
34,000	AA8	36 HD	13.87	36 HD	15.56	36 HD	17.05	36 HD	18.57	36 HD	20.31	36 HD	23.54	2,656
38,000		36 HD	17.67	36 HD	19.30	36 HD	21.14	36 HD	22.80	36 HD	24.48	36 HD	28.12	2,969
42,000		36 HD	22.03	36 HD	23.86	36 HD	25.91	36 HD	27.74	36 HD	29.57	36 HD	33.77	3,281
46,000		36 HD	27.10	36 HD	29.15	36 HD	31.76	36 HD	33.72	36 HD	35.74	36 HD	39.75	3,594
50,000		36 HD	33.21	36 HD	35.54	36 HD	37.81	36 HD	40.48	36 HD	42.68	36 HD	47.03	3,906
54,000		36 HD	39.65	36 HD	42.67	36 HD	45.17	36 HD	47.62	36 HD	50.47	36 HD	55.20	4,219

These Models Have Heavy Duty Fans (HD) Included

NOTES:

Outlet Velocity listed is for fan size shown in the 1.00" TSP column.

HD designation = Heavy Duty Fans with Pillow Block Bearings. All other fans have sleeve ball bearings.

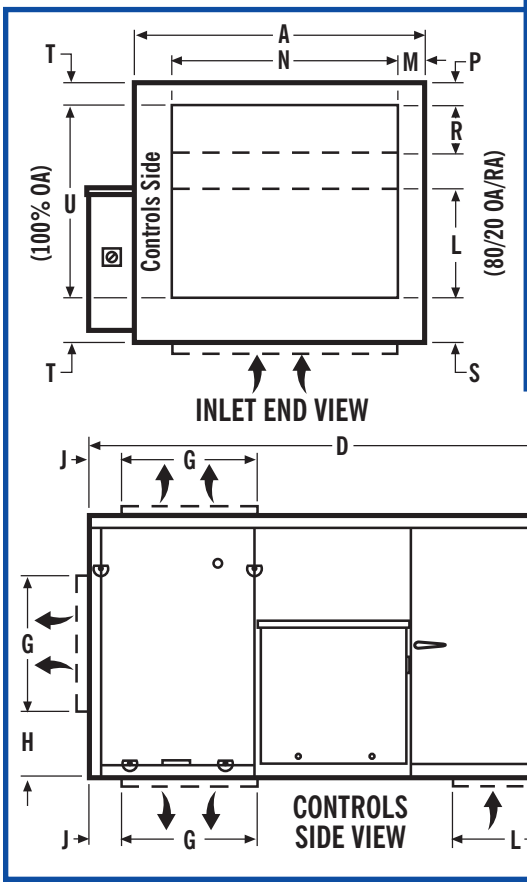
CF = Consult Factory.

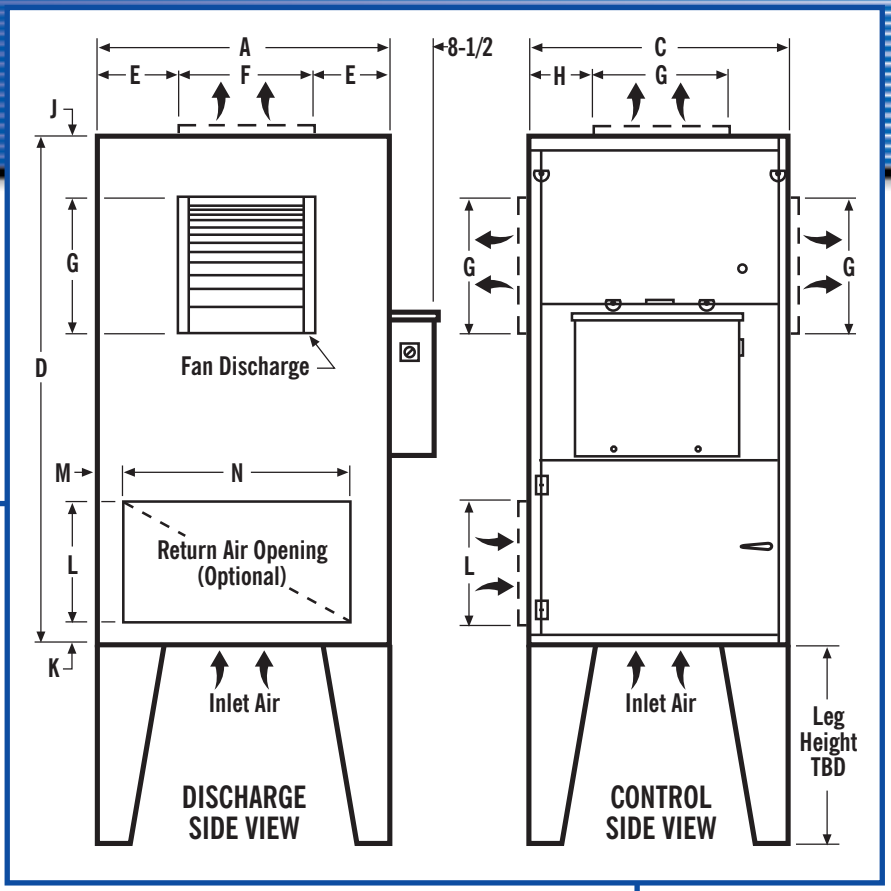
All BHP's listed include drive losses. Fan performance based on 750' elevation & 70°F discharge temperature.

THIS DATA IS SUBJECT TO CHANGE WITHOUT NOTICE. CONSULT FACTORY FOR SPECIFIC APPLICATIONS

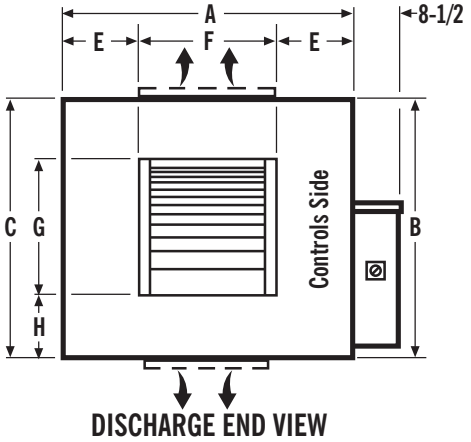
Dimensional Data

Horizontal Cabinets



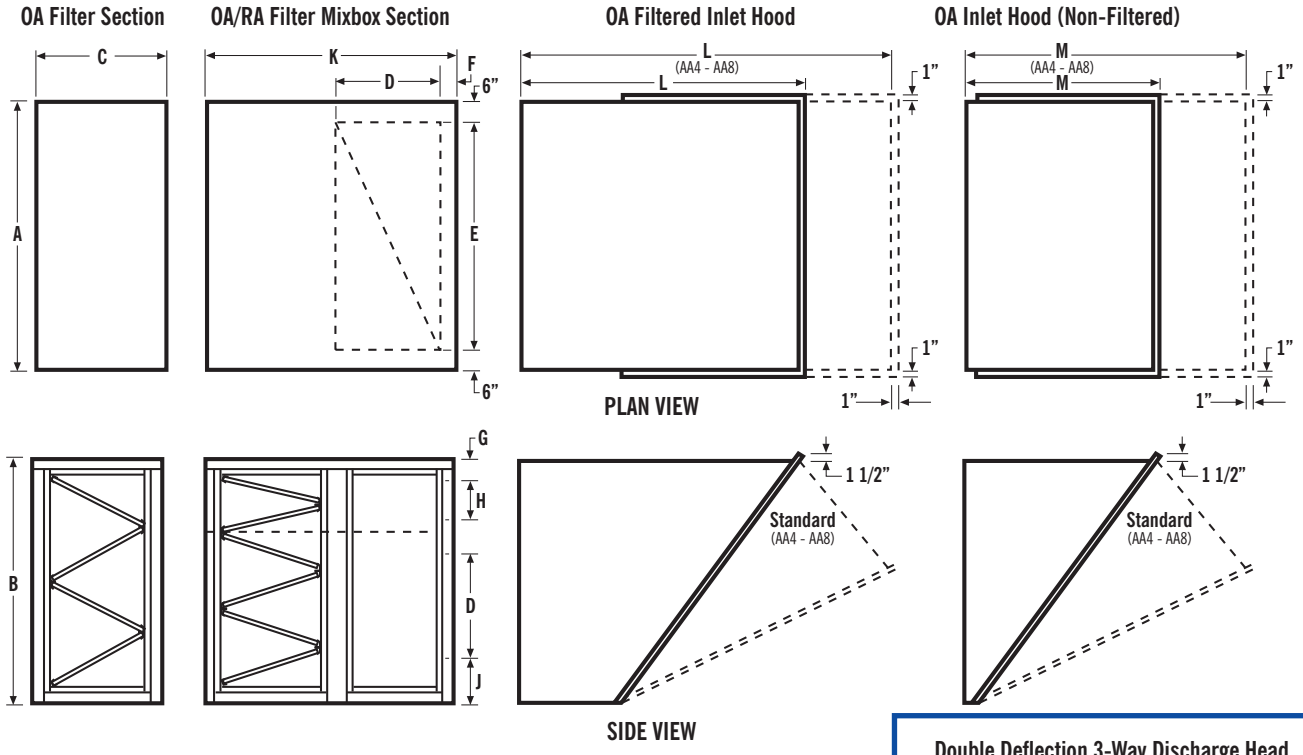


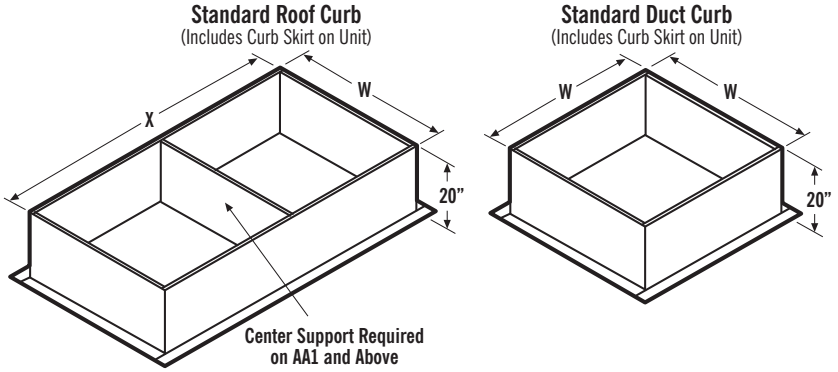
Upright Cabinets

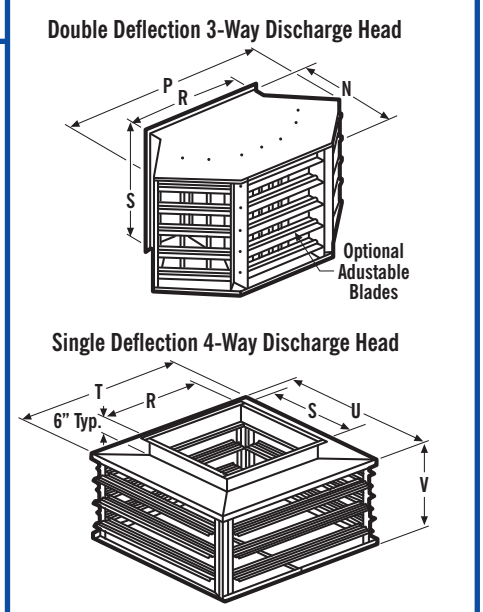


Model	Unit Size				Discharge Openings, Inches					O.A./R.A. Openings, Inches								
	A	B	C	D	E*	F*	G*	H*	J*	K	L	M	N	P	R	S	T	U
AA1700	28	24	24	50	CF	6-7/8	11-3/8	6-7/16	6-1/2	N/A	N/A	N/A	16	N/A	N/A	N/A	N/A	16
AA3000	32	28	28	72	9-7/16	13-1/8	11-3/8	6-7/16	6-1/2	8	12	3-3/4	22	5	6	5	5	18
AA1	40	33	33	92	10-11/16	18-5/8	15-7/8	8-3/4	6	6	16	4-9/16	29	4	4	5	4	25
AA2	40	33	33	92	10-11/16	18-5/8	15-7/8	8-3/4	6	6	16	4-9/16	29	4	4	5	4	25
AA3	48	38	38	92	13-1/16	21-7/8	18-7/8	10-3/8	6	6	20	4-9/16	36	4	5	4	6	26
AA4	55	47	47	92	15-1/8	24-3/4	24-3/4	11-1/4	11-1/4	4	24	4-9/16	41	3	6	8	7-1/2	32
AA5	74	54	54	102	23-3/8	27-1/4	27-1/4	12-1/4	12-1/4	4	28	3-13/16	60	4	7	9	7	40
AA6	74	54	54	102	21-3/8	31-1/4	31-1/4	13-1/2	13-1/2	4	28	3-13/16	60	4	7	9	7	40
AA7	90	70	70	138	26-5/8	36-3/4	36-3/4	16-3/4	16-3/4	4	40	3-11/16	76	5	10	9	10	50
AA8	98	78	77	146	27-5/8	42-3/4	42-15/16	14-13/16	14-13/16	6	44	6	80	5	10	8	6	66

NOTES: N/A = Not Available TBD = To Be Determined CF= Consult Factory * = Dimensions are for maximum fan size
This data is subject to change without notice.







Options & Accessories

Dimensions, Inches																					
Model	A	B	C	D	E	F	G	H	J	K	L	M	N[1]	P[1]	R[1]	S[1]	T	U	V	W[2]	X[2]
AA1700	28	24	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24	24	19-1/16	28-1/8	14	14	25-1/2	25-1/2	12	24	46
AA3000	32	28	25	12	20	6	5	6	5	46	22-1/2	24-3/8	19-1/16	28-1/8	14	14	25-1/2	25-1/2	12	28	68
AA1	40	33	25	16	28	6	4	4	5	48	26-1/2	26-1/4	20-9/16	33-1/4	19	19	30-1/2	30-1/2	16	36	88
AA2	40	33	25	16	28	6	4	4	5	48	26-1/2	26-1/4	20-9/16	33-1/4	19	19	30-1/2	30-1/2	16	36	88
AA3	48	38	25	20	36	6	4	5	5	53	26-1/2	35-5/8	21-1/2	36-3/8	22-1/4	22-1/4	33-3/4	33-3/4	17	44	88
AA4	55	47	25	24	43	4	6	6	11	53	74	56	22-5/16	39-1/8	25	25	45-7/8	45-7/8	18	51	88
AA5	74	54	25	28	62	4	4	7	8	58	91	73	23-3/16	42-1/8	28	28	48-7/8	48-7/8	24	70	98
AA6	74	54	25	28	62	4	4	7	8	58	91	73	24-5/16	46-1/8	32	32	52-7/8	52-7/8	26	70	98
AA7	90	70	36	40	78	4	9	10	11	70	84	84	26-1/4	52-1/8	38	38	64-1/2	64-1/2	30	85	133
AA8	98	78	36	42	86	6	5	11	8	74	84	84	28	58-1/4	44	44	70-1/2	70-1/2	35	93	141

NOTES: N/A = Not Available 1 = Dimensions are for maximum fan size 2 = Curb dimensions are for base unit only

Recirculation & Variable Volume Arrangements

AA-Series units are enhanced with a variety of airflow and control options. These direct gas fired heating and ventilating products are available ETL Certified to current ANSI Design Standards. AbsolutAire has a strong commitment to provide its customers with safe, dependable, high-quality, efficient products.

Return Air Models

Three variations of Return Air Models are available. Each is designed to operate with a minimum of 20-percent outside air (OA), recirculating a certain amount of return air (RA). Recirculation helps to conserve energy by re-heating warmer building air. Return Air Models include:

"M" Option — These units are capable of modulating between 20% and 100% outside air (OA), and 80% to 0% return air (RA). All modulating return air models use a Maxitrol Series DFM digital, programmable space temperature control. M-Option models are commonly used for space heating and ventilating when building doors are opened and closed or exhaust fans are cycling on and off throughout the day.

"B" Option — These units are two-position OA/RA units that can be in either the 100% OA mode or in the 20% OA and 80% RA mode. A Maxitrol Series DFM space temperature control system is used. B-Option models are commonly used when total make-up air is needed during certain periods and minimal outside air during the remaining times. Different RA/OA blend percentages are available.

"F" Option — These units are designed for full-time air-rotation. A two-position damper is used on the outside air inlet only. The return air opening is fixed and is not equipped with a damper. A Maxitrol Series 44 space temperature control system is standard. F-Option models are usually furnished with a 20% OA and 80% RA ratio, but other air mixing ratios are available.

Variable Volume Models

When 100% outside air is needed, Variable Volume, or **"V" Option** models add a significant capability for precisely controlling the supply air. The supply air volume can usually be reduced to a minimum of 35%. Such precise supply air control is achieved with a variety of methods, including two-speed motors, variable frequency drives (VFDs) or motorized dampers.

V-Option models include a profile damper with a differential pressure switch, which maintains the correct static pressure across the burner profile opening. These units may use a building pressure switch for modulating the air volume or a selector switch for a fixed high-low volume ratio. A Maxitrol Series 14 discharge temperature control system is standard. Common applications include spray and bake paint booths, wastewater treatment plants and other uses in which recirculating the building or space air may not be desirable.

Spray and Bake Configuration

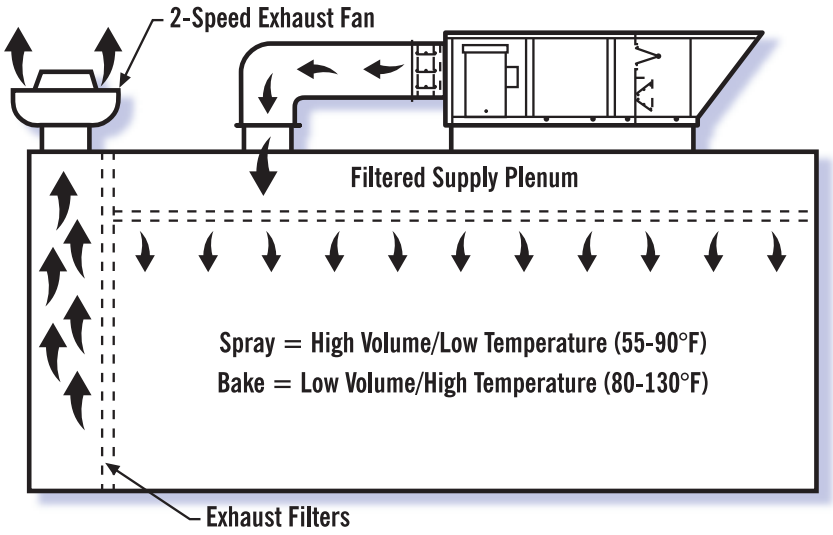
AbsolutAire's AA-Series Spray and Bake units offer increased productivity when used in place of standard "paint booth make-up air" systems. The high-temperature bake cycle can greatly reduce the drying times required for many of today's advanced automotive and industrial paint finishes.

Standard Features

- ▲ High/Low Air Volume
- ▲ Dual Temperature Selectors (Spray 55-90ºF, Bake 80-130ºF)
- ▲ Class F Fan Motor with Heat Shield
- ▲ Ultraviolet Flame Safeguard System
- ▲ Pre-Purge of Unit Cabinet
- ▲ Manual Spray-to-Bake Changeover
- ▲ Adjustable Timed Bake Modes
- ▲ Locking Remote Panel with Pilot Lights

Optional Features

- ▲ 120-170ºF Bake with Class H Fan Motor
- ▲ Adjustable Cycle Timers for Flash/Bake/Cool-Down
- ▲ Exhaust Fan Motor Starters and Interlocks
- ▲ Special Paint Colors and Finishes
- ▲ Custom Designed Electrical Features
- ▲ Extended Grease Lines
- ▲ Special Filtration
- ▲ Other Available AA-Series Options



Standard Controls Sequence

AbsolutAire's AA-Series Spray & Bake models are designed and built with a variety of specially engineered control sequences to match precise operational needs. The standard control sequence is:

SPRAY MODE: Controls provide constant high-volume, low-temperature operation. Meets ANSI Z83.4a-2001 (occupied).

BAKE MODE: When the "Start Bake" button on the remote is activated, the controls shift to low-volume, high-temperature operation for a user-selected period. Meets UL 795 (unoccupied).

COOL DOWN: After "Bake" is completed, the controls shift to high-volume, low-temperature operation until the "Bake Mode" is again selected.

Features, Options, Accessories

Standard Feature Descriptions

Maxitrol Series 14 Controls: Discharge temperatures are monitored and controlled either remotely or at the unit. The burner will modulate up or down as needed to maintain the discharge temperature set point.

Low Temperature Limit: A low limit stat is installed in the unit discharge to turn off the fan motor in the event of a flame failure. An automatic by-pass timer is provided for start-up.

Pre-Purge: A positive, timed purge cycle helps to insure a minimum of three air changes in the unit housing before ignition of the burner. Other cycles are available.

Remote Control Panel: A remote control panel is provided with a summer-off-winter switch, indicator lights and temperature controls.

Remote Reset: Electronic flame safeguard controls are provided with a remote flame reset switch.

Non-Fused Disconnect: A pre-wired, non-fused disconnect switch in a NEMA 3R enclosure is standard, except on AA1700 models.

UV Flame Detection: The burner pilot and main flame is monitored with an ultraviolet sensor.

Low Fire Start: Burner ignition takes place with a positive timed low fire start.

Mechanical Options and Accessories*

Extended Grease Lines: On models equipped with an HD blower, extended grease lines to the unit outside wall can be provided.

Roof Curb: A reinforced, aluminized steel roof curb can be provided for unit support.

Insulated Housing: The unit housing can be insulated with 1-inch, 1.5-pound-density fiberglass insulation. The insulation will be glued and pin-welded in place with mechanical fasteners.

Intake Hood: An intake hood, to minimize the ingestion of moisture, can be provided. The hood will be welded, sealed and made weather-resistant.

Side Access Filter Section: A V-bank filter section with rigid side rails can be provided with 1″ aluminum cleanable filters. Other filter types and sizes are also available.

Filtered Mixing Box: A filtered mixing box can be provided behind the OA/RA dampers to filter both outside and return air.

Motorized Dampers: Galvanized-steel dampers, 16-gauge on the intake (I) or discharge (D) side of the unit, can be opened or closed using a two-position motor. An end switch will prevent fan and burner operation before the damper is in full-open position. Low-leak damper options, with blade and jam seals, are also available.

Three-Way Discharge Diffuser: A rigid, welded three-way discharge diffuser can be provided for 180-degree air distribution. Directional control options include single- or double-deflection blades.

Four-Way Discharge Diffuser: A rigid, welded four-way discharge diffuser can be provided for 360-degree air distribution. Directional control options include single- or double-deflection blades.

Splash Plate: For down-discharge units, a splash plate can be provided for re-direction of airflow.

Suspension Vibration Isolation: Spring-type vibration isolators, sized for the unit weight can be provided. (Horizontal units only.)

Internal Vibration Isolation: The blower and motor can be isolated from the unit housing using elastomeric in-shear isolators. Spring isolators are also available.

*Consult Factory for Options Not Listed.

Service Platform: A service platform can be provided with a ladder. Handrails and platforms meet OSHA requirements.

Variable-Pitch Sheave: An adjustable-pitch sheave will be used on units with a 10-hp or less blower-motor.

Evaporative Cooling: Evaporative media helps to control space humidity and provide occupant cooling and comfort.

Heating Coils: Steam, Hot Water (HW) or Electric Resistance coils can be used with the direct gas fired burner or sized to replace it.

Cooling Coils: Chilled Water (CW) or Direct Expansion (DX) coils can be provided to add seasonal cooling to the unit.

High-Efficiency Filtering: Various bag and cartridge filters, with 65% to 95% efficiencies, can be provided. HEPA filters are also available. Consult factory for specific details.

Electrical Control Options and Accessories*

TEFC EPACT Motor: The blower-motor will be tri-voltage, 1800 rpm, totally enclosed, and fan-cooled. The motor will have a T-frame, a minimum service factor of 1.15, and an adjustable base.

Maxitrol Series 44 Controls: Space temperatures are monitored and controlled remotely. The burner modulates as needed to maintain a discharge temperature adequate to maintain the space temperature.

DFM Temperature Controls: Space temperatures are monitored, along with outside, return and discharge air temperatures. Damper position is also tracked to insure unit operation per ANSI Z83.18a-2001. These controls include a digital display and a built-in program-mable time clock for temperature setback. This system is standard on M- and B-Option Return Air models.

Mild Weather Stat: An outdoor air thermostat is provided to automatically de-energize the burner when the outdoor air temperature reaches a certain, adjustable set point

Dirty (Clogged) Filter Indicator/Alarm: A pressure-sensing switch is used to monitor airflow filtering. The switch will energize a warning light (and/or alarm) when the filters need maintenance.

Circuit Analyzer: Monitoring circuits, with indicator lights at the remote panel, are used to verify operational functions.

Continuous Setback: A separate temperature control is provided to allow a lower temperature set point (i.e., unoccupied night setback).

Cycle Stat: A room-sensing thermostat is provided to cycle the unit on and off to maintain a set space temperature. (Available up to 15hp.)

Time Clock: A 24-hour, 7-day time clock is provided to allow automatic operation of the unit. The control sequence is user-defined.

Dual Temperature Range: In spray and bake applications, a dual-range control provides a standard discharge temperature and switches to a higher discharge temperature for bake or dry cycles.

Fused Disconnect: A pre-wired, fused disconnect switch in a NEMA 3R enclosure is optional on all models.

Smoke Detector (Loose or Installed): A smoke detector is provided to interface with other safety indicators/alarms. Return Air models can have an installed smoke detector located in the RA mixing chamber.

Gas Control Options and Accessories*

FM/IRI Gas Manifold: The gas train is built to meet Factory Mutual (FM) and/or Industrial Risk Insurers (IRI) requirements.

High Gas Pressure Regulator: A full lock-up regulator, with internal relief, is provided to allow adjustment of the inlet gas pressure to below the maximum allowable shown on the unit rating plate.

High/Low Gas Pressure Switches: Manual reset safety switches are provided to disable the heating circuit if gas pressure rises above or falls below user-selected set points.

*Consult Factory for Options Not Listed.

General Specifications

Furnish and install a direct gas fired make-up air unit including all components as shown on plans. The unit shall be completely factory assembled by AbsolutAire and wired in accordance with the National Electric Code (NEC) and NFPA 70. The unit shall include:

A. Blower mounted downstream of the burner to insure a constant volume of discharge air, regardless of inlet air temperature. Blower shall be a double-width double-inlet (DWDI) forward curved centrifugal type, dynamically balanced with ball bearings and solid steel shaft.

B. Cabinetry fabricated of 18 gauge aluminized steel (16 gauge for AA7 and AA8 models). Housing shall be constructed with a rigid welded frame with water-resistant, easy-access, lift-out or hinged side panels for complete accessibility. Intake filter racks shall be of the easy-access type, requiring no tools for removal of the cleanable mesh intake filters.

C. When specified, a motorized inlet-air shut-off damper and all operating controls shall be provided.

D. The supply air blower and the direct gas fired heating compartment, fabricated as a single section.

E. When specified, the unit interior shall be provided with one-inch-thick 1-1/2# density fiberglass.

F. All exterior surfaces treated with a two-coat paint finishing process.

G. A factory-wired master control panel mounted in a weather-resistant enclosure. The panel shall include a magnetic motor starter or contactor and overload relay, fused control transformer, terminal strip, heat relay, and high and low temperature limit switches. All controls shall be pre-wired to a factory-installed disconnect switch (optional on AA1700 models).

H. All gas controls including control switch, circuit fuse, flame safeguard relay, ignition transformer, electric solenoid gas valve, modulating gas valve with a 30:1 turndown ratio capability, gas pressure regulators, and air-pressure differential switch. All gas controls shall be mounted inside the control enclosure behind an easy-access service panel.

I. A burner, fabricated of stainless-steel mixing plates and a heavy-duty cast-iron manifold. Ignition of the pilot shall take place through the use of a spark igniter and verified through the flame-safeguard system.

J. A rigid mount, ball bearing type, open drip proof, EPACT-compliant fan motor, suitable for the specified voltage. All motors to be mounted on an adjustable base for belt tensioning.

The AbsolutAire Two-Year Parts & 90-Day Labor Limited Warranty

Parts furnished by AbsolutAire that prove to be defective at the site of the original installation within **24 months from the date of start-up, or 27 months from the date of shipment,** whichever comes first, will be replaced or repaired at AbsolutAire's discretion. **Wear items, such as V-belts, filters, etc., are not included as covered parts under this Warranty.** Defective parts must be returned to AbsolutAire at the customer's expense. Warranty replacement parts will be shipped freight prepaid from AbsolutAire via normal ground service.

The customer must notify AbsolutAire promptly in writing of any claim under this Limited Warranty. AbsolutAire will require information to ensure the equipment has been installed and maintained properly, and operated as intended within the specifications as stated on the AbsolutAire Quotation and/or Order Acknowledgment. Components provided by others are not covered under this Warranty. If an AbsolutAire part fails as a result of components furnished by others, the AbsolutAire component may not be covered under this Warranty.

Reimbursement for labor to remove and/or install replacement parts is included in this Warranty for a period of 30 days from field start-up or 90 days from shipment, whichever comes first. AbsolutAire is responsible to determine the amount of labor reimbursement allowed, based upon the circumstances for each installation. Labor cost reimbursement must be approved by AbsolutAire **prior** to work being performed.

Disclaimer: The warranties contained in this written Limited Warranty are made in lieu of all other warranties expressed or implied, statutory or otherwise. In particular, AbsolutAire makes no warranty of merchantability for fitness for a particular purpose, unless written and signed by an officer of the Company referencing this particular disclaimer. AbsolutAire shall have no liability to the customer/owner for direct, consequential or incidental damages of any kind whatsoever.

Installed Performance

AbsolutAire AA-Series Heating, Ventilating and Make-Up Air systems deliver maximum design flexibility as well as exceptional application versatility. With standardized components and a highly efficient build sequence, the entire product range is competitively priced and designed to meet quick-ship schedules. Easy installation is a key reason the AA-Series is a most-popular choice for restaurant kitchen make-up air, commercial warehousing and small- to mid-size manufacturing operations.

SATISFACTION & PERFORMANCE

Other
Pure and Simple Solutions:

- M-Series Make-Up Air Fan Boxes
- V-Series Direct-Fired Make-Up Air Value
- R-Series Direct-Fired Heating & Ventilating
- E-Series Direct-Fired Air Turnover
- S-Series Air Handling Systems
- I-Series Indirect-Fired Heating & Ventilating
- Spray & Bake Paint-Booth Heating Systems
- CH, DH & APD Heaters & Air-Process Dryers
- Coil & Evaporative Cooling Options
- LX1 Direct Digial Control (DDC) System

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