Spring Air

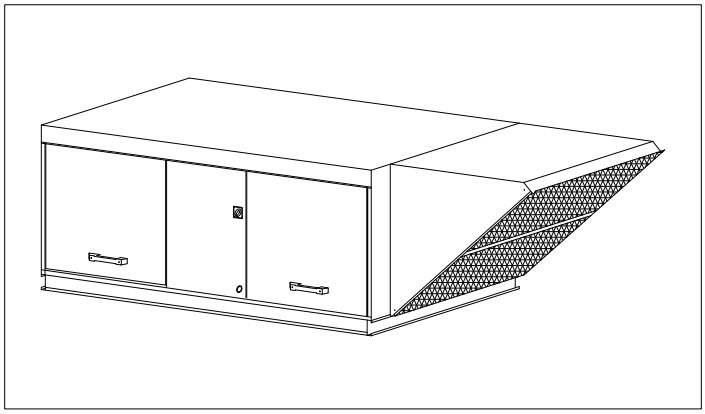
SUPPLY AIR UNITS
Direct Gas Fired Fresh Air

SAA-Series

Spring Air's Value-Driven Make-Up Air Systems

Direct-Fried Make-Up Air Systems are widely used in kitchen and foodservice operations. With value-driven design excellence, SAA Series make-up air systems offer unsurpassed economy, application versatility, low-maintenance durability, and exceptional product support. No one can match the value-added advantages of SAA Series.

Spring Air SAA Series models are provided in capacities from 800 to 13,000 CFM with 100% fresh air heated by either natural of LP gas. Impressive standard features simplify unit installation, boost operating efficiency, and reduce service costs. Select optional features enhance the value even further.



Truflow Enabled Demand Ventilation Available: The SAA can be supplied with a VFD and modulating profile plate to provide kitchen demand ventilation down to 50% reduction in fresh air volume.

PROFILER Gas Burner Adjustment System

Safety and efficiency depend on proper air velocity across the burner. Installation static pressures may require burner profile adjustments. Spring Air's Profiler system includes a built-in manometer and profile-adjustment mechanism for ensuring the correct burner pressure drop during field startup.

Smart Technology: Dialing in the correct burner pressure drop is simple and exact with the innovative Profiler system. Other controls prevent firing if the airflow velocity is outside an acceptable range.

Quiet Efficiency Moving Air

Solidly assembled to a vibration-isolated base, SAA Series fan-motor assemblies are built for high performance and quick service. A DWDI forward-curved fan is mated to an EPACT-compliant motor, and an advanced V-belt drive package with variable-pitch sheaves is designed with a safety factor of 30% over motor nameplate capacity.

Smart Service: SAA Series drive-belt tensioning is quick and sure with an easily adjusted pivot- or slide-type motor mount.

Easy-Access Control Modules

Safely concealed behind a lift-off, weather-tight access door, SAA Series electrical and gas controls are designed for failsafe performance during startup and operation. A power disconnect switch and gas-inlet fitting are on the cabinet exterior.

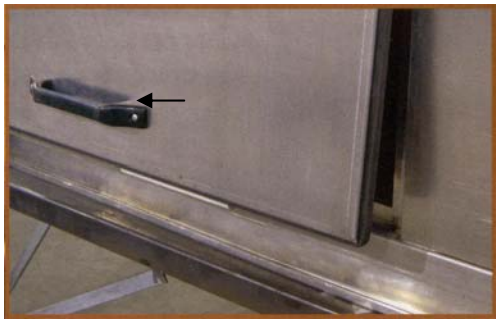
Smart Controls: Modular electrical and gas controls feature positive-locking connectors and fittings for exceptional reliability.

Real VALUE in the Details

Delivering the *Best Available Value* means setting new standards in cost, content, and performance. Spring Air's value-driven SAA Series make-up air systems are unequalled. And, real value goes beyond best price and best delivery.

Pure & Simple: Real value is in the details. Just look at the impressive array of standard features, key innovations, and attractive options.

Pre-wired conduit (15 feet) is supplied for making power and control connections; pigtails are marked for quick field tie-ins.



Weather-tight lift-off panels allow easy access to controls, burner, and blow-motor sections.

Advanced SAA Series burner technology includes low-maintenance, cast-aluminum manifolds with non-clogging, stainless steel mixing plates.

- An optional inlet hood features a clamshell-style filter rack with replaceable polyester filters or cleanable aluminum-mesh filters. No tools are needed to change filters.
- Optional cooling can be provided with evaporative media or with chilled-water (CW) or direct-expansion (DX) coils.

A parallel-blade, motorized inlet or discharge damper (optional) features a 24V actuator, pre-wired for field connection. (Gravity-style, backdraft damper assemblies are also available.)

Value-Added Advantages

- Unsurpassed Economy
  - Competitive Low First Cost
  - Quick and Easy Installation
  - Ultra-Efficient Operation
- Application Versatility
  - Various Airflow Ranges
  - Fueled with Natural or LP Gas
  - Cooling Options Available

- Low-Maintenance Durability
  - Non-Corrosive Cabinet
  - Sealed, Lift-Out Access Panels
  - Fan & Motor Vibration Isolation
- Exceptional Product Support
  - Quick-Ship Availability
  - 100% Factory Testing
  - Exclusive Limited Warranty

Standard Features

- Remote Control Panel (NEMA 1,2 & 5 Enclosures)
- Non-Fused Disconnect Switch
- Installation Wiring Harnesses & Flexible Conduit
- Pre-Wired and Pre-Piped Unit Control Modules
- Aluminum Cast Burner with 30:1 Turndown Capability
- Profiler Burner Adjustment System with Built-In Manometer
- Direct Ignition with Low Fire Start
- Flame Safeguard Controls with Remote Reset
- ETL Certification to ANSI Design Standards
- 100% Factory Testing (Mechanical & Functional)
- IEC Motor Starter(s) and Overload Protection
- Rigid Channel Base
- Extruded Aluminum-Tube Frame
- Weather-Tight, Non-Corrosive Skin
- Foil-Faced Interior Insulation
- Lift-Out Access Panels with Gaskets & Handles
- Integral Lifting, Mounting, Suspension Points
- Horizontal (End) or Down Discharge
- DWDI Forward-Curved Fan
- Fan Bearings Rated L_{10} Life (100,000 hrs. min.)
- Fan & Motor Vibration Isolators (Neoprene rubber)
- Drive Motor with Variable-Pitch Sheaves
- Maxitrol Series 14 Discharge Temperature Control (at unit)

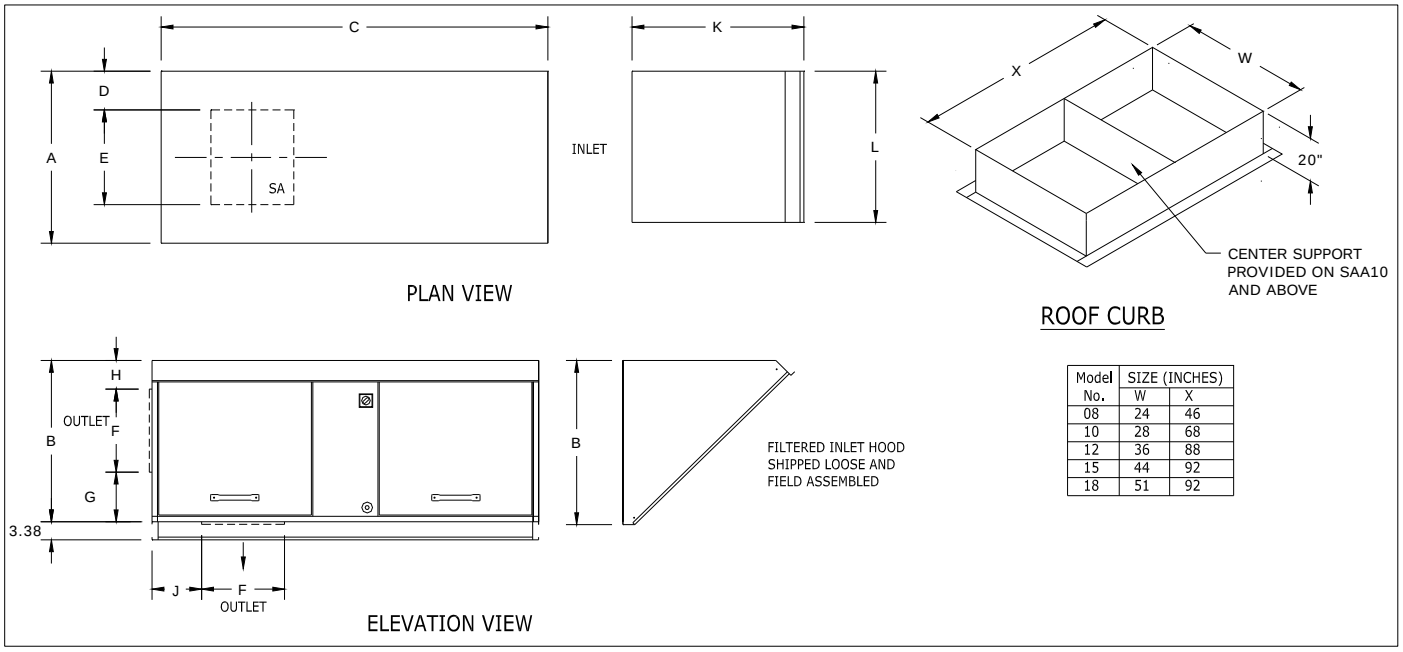
SAA Fan Chart

CFM	Fan Model	Model No	Fan and Motor Requirements @ Total Static Pressure Shown										Outlet Velocity (FPM)
			0.80"		1.00"		1.25"		1.50"		2.00"		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
800	10-8	SAA08	888	0.22	1004	0.26	1134	0.3	1251	0.37	CF		965
1000			883	0.27	989	0.32	1110	0.38	1227	0.44	CF		1206
1250			880	0.35	986	0.41	1103	0.48	1210	0.59	1406	0.74	1507
1500			888	0.4	985	0.55	1101	0.64	1208	0.72	1397	0.92	1808
1700			903	0.56	994	0.64	1102	0.75	1206	0.87	1395	1.1	2050
1600	10	SAA10	853	0.47	950	0.59	1075	0.73	1191	0.89	1395	1.23	1543
2000			872	0.66	962	0.78	1066	0.92	1163	1.1	1362	1.43	1929
2400			904	0.9	987	1.05	1084	1.19	1175	1.35	1345	1.71	2315
2800	12		760	0.85	840	0.97	932	1.16	1018	1.32	1177	1.67	1920
3000			768	0.95	845	1.11	936	1.27	1020	1.44	1175	1.8	2057
3500			794	1.27	865	1.41	950	1.62	1030	1.81	1178	2.24	2400
3200	15	SAA12	659	0.8	727	0.94	808	1.15	889	1.35	1038	1.75	1558
4000			683	1.12	749	1.3	824	1.51	892	1.74	1022	2.25	1948
5000			729	1.72	786	1.91	854	2.2	920	2.43	1040	2.93	2435
6000			786	2.52	837	2.75	899	3.12	957	3.41	1070	3.98	2922
6800			836	3.37	884	3.63	941	3.95	996	4.27	1099	4.92	3312
4900	18	SAA15	505	1.23	562	1.43	633	1.72	709	2.15	CF		1709
5500			511	1.48	564	1.7	629	1.97	692	2.33	CF		1918
6500			530	2.02	577	2.29	634	2.58	690	2.89	797	3.66	2267
7500			554	2.71	598	2.98	650	3.4	700	3.73	796	4.42	2616
8100			569	3.23	613	3.56	662	3.91	710	4.26	801	4.99	2825
6800	20	SAA18	471	1.77	519	2.12	578	2.54	633	2.98	736	4	1599
7500			482	2.11	525	2.41	580	2.84	633	3.38	732	4.37	1763
9000			511	2.92	549	3.34	596	3.77	641	4.23	732	5.39	2116
10500			545	4.09	580	4.44	623	4.91	663	5.51	742	6.56	2468
12000			584	5.58	616	5.98	655	6.48	692	7.01	764	8.24	2821
13000			611	6.69	642	7.12	679	7.78	714	8.83	782	9.49	3056

Static Pressure Drops

Cabinet	0.80
Filtered Inlet Hood	0.10
Motorized Inlet Damper	0.10
Motorized Discharge Damper	0.20
Side Access Filter	0.25

Total Static Pressure Drop: After adding the losses from the cabinet and options, also add project-specific ductwork losses (user provided)



Model No.	SIZE (INCHES)	
	W	X
08	24	46
10	28	68
12	36	88
15	44	92
18	51	92

Dimensional Data

Model No.	Size (inches)										
	A	B	C	D	E	F	G	H	J	K	L
08	28	24	50	10-1\2	12-1\2	13-3\8	6-7\8	3-3\4	8	27	22-7\8
10	32	30	72	7-3\16	17-5\8	15-7\16	8-1\4	6-5\16	9-1\4	32	27-7\8
12	40	33	92	9-11\16	20-5\8	17-7\8	9-3\8	5-3\4	10-1\2	41	34-7\8
15	48	38	96	12-1\16	23-7\8	20-7\8	11	6-1\8	12-1\4	37-1\2	42-7\8
18	55	48	96	14-1\8	26-3\4	26-3\4	12-15\16	8-5\16	13-1\2	47	52-7\8

Heating Capacities

Model	Gas Manifold Size (IPS)	Maximum MBH	Min. Pressure Required at Maximum MBH (Inches W.C.)	Maximum Inlet Gas Pressure (Inches W.C.)
08	1\2	155	7	14
10	1\2	290	8	14
12	3\4	625	8	14
15	3\4	745	9	14
18	1	1,125	13	28

Notes:

1. Maximum MBH capacities listed are based on a unit operating at 750 feet elevation and an outside air (OA) temperature of –10F.
2. Ratings are for both natural and propane gas, and are limited to the lesser of the maximum MBH shown or a temperature rise of 80F.
3. If the MBH required is greater than 625 MBH a 1” manifold will be required.

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