





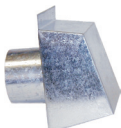

VENTERGY® IAQ-FSVS

**FILTERING SUPPLY VENTILATOR
ACCESSORY KITS CONTINUOUS SUPPLY**

RESIDENTIAL SYSTEM SOLUTIONS

Product Description

ALDES North America Ventergy® Series IAQ-FSVS Filtering Supply Ventilator Kits are the best way to supply constant, precisely regulated amounts of fresh air to central forced air (heating/cooling) systems in homes. Compared to using a motorized damper, the IAQ-FSVS constantly and efficiently provides fresh air to the at a precisely regulated low volume. Motorized dampers only provide high volumes of fresh air when the forced air system is running. The IAQ-FSVS is the superior solution for better indoor air quality, comfort, and energy efficiency.

Description	6" MR Modulo (CFM)	Variable Speed Controller	6" Wall Hood**	RECOMMENDED FAN Sold separately ENERGY STAR Certified* Ventilator
				
Manual Flow Control	--	1	1	FSVS140
Automatic Flow Control	60-140 (100-240 m3/h)		1	FSVS140

For more information, contact your Aldes sales advisor, visit aldes-na.com, call 1.800.255.7749, or find us on





MR MODULO

ADJUSTABLE CONSTANT AIRFLOW REGULATOR

AIRFLOW & ZONE CONTROL



Product Description

The model MR Modulo Adjustable Constant Airflow Regulator is a modulating orifice that automatically regulates airflows in duct systems to constant levels. The passive control element responds to duct pressure and requires no electric or pneumatic sensors or controls.

The MR Modulo compensates for changes in duct pressure caused by thermal stack effect, building pressure, dust-clogged filters, etc. The MR Modulo also provides a quiet, low-cost solution to balancing forced-air systems for heating, air conditioning and ventilation, eliminating the need for on-site balancing. The MR Modulo will regulate airflow in supply, return, or exhaust duct systems. It can be mounted horizontally or vertically, and can be fitted in ductwork and accessories.

The active control element of the MR Modulo is a flexible bulb that inflates and deflates in response to the static pressure difference across the control. This operation regulates the free-area opening through the control, resulting in maintenance of velocity and specific airflow setpoints. Each MR Modulo is designed and produced for control of air in temperatures ranging from 14° to 140°F (-10° to 60°C).

Construction

The MR Modulo is constructed of PC / ABS plastic, and it is UL 2043 safety classified and labeled for flame and smoke generation. The assembly is sized to fit inside standard rigid round ducting, as well as fittings such as take-offs, tees, etc. A double-lip airtightness seal around the circumference ensures a tight, no-leak fit.

Installation

The MR Modulo will push-fit into circular ducts in close proximity to a take-off or a terminal. Mounting can be horizontal or vertical. The MR Modulo orientation must correspond to the airflow direction indicated on the device.

Warranty

Guaranteed for five (5) years, from date of shipment, against all defects in material or workmanship, provided that the material has been installed and used under normal conditions. This warranty is limited to the repair or replacement of the material.

Performance

The MR Modulo airflow regulators control airflow accurately to within ± 3 CFM (5 m³/h) for nominal airflow ≤ 30 CFM (50 m³/h) and $\pm 10\%$ for nominal airflow > 30 CFM (50 m³/h) throughout the target operating pressure range of 0.2 to 1.0 in. w.g. (50 to 250 Pa). Each diameter of MR Modulo regulator is available in multiple factory-calibrated setpoints (see performance curves). Field adjustment of airflow setpoints is achieved by twisting the integral rotating ring to the desired setpoint. No tools are required.

Maintenance

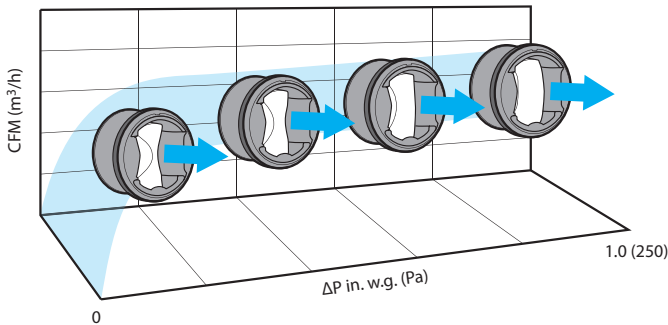
The MR Modulo needs no maintenance when used in normal conditions. There is no risk of dust deposits or obstruction because the MR Modulo has no airways subject to clogging. If the intended application includes air heavily loaded with grease or dust, a fitting with an access panel or door, such as that used for flame dampers, should be provided.

APPLICATIONS

- Supply and exhaust air for offices
- Balancing exhaust and supply airflows in high-rise building duct risers
- Bathroom exhaust in nursing homes, hotels, motels, dormitories, apartments, offices, etc
- Clean room air supply balancing for ceiling filter modules. Maintains constant airflow, even as filter resistance increases
- Regulation of make-up air
- Balancing supply airflow from packaged roof-top A/C units
- Balancing supply and exhaust of heat recovery ventilation systems
- Regulating outdoor air injection from central supply fan into individual room fan coil units or heat pumps
- Balancing airflows on series-fan-powered terminal unit systems
- Supply air to sleeping quarters in military facilities, submarines, etc

How the MR Modulo Works

Constant airflow is achieved by the inflating action of the MR Modulo's bulb. At minimum static air pressure, the bulb is deflated and has a shape similar to an hourglass. As the static pressure increases across the bulb, it inflates, thereby reducing the free area around the bulb. At the same time, the higher static pressure increases the air velocity, resulting in **CONSTANT AIRFLOW**. This occurs regardless of pressure differences in the range of 0.2 to 1.0 in. w.g. (50 to 250 Pa). The air velocity in the duct is in the range of 60 to 700 ft/min. (0.3 to 3.5 m/s).



Construction

1. Removable clip
2. Regulating silicon membrane
3. Double-lip airtightness seal
4. Housing
5. Rotating airflow adjustment ring

Information indicated directly on the product:

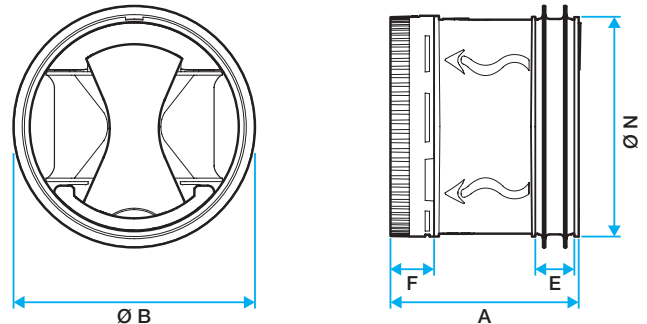
- Flow direction, diameter, operating differential pressure range, part number, and date of manufacture
- Airflow setting range correlation table in CFM and m³/h

Recommended Specification

Model MR Modulo Adjustable Constant Airflow Regulators by American ALDES Ventilation Corporation, Bradenton, Florida, shall operate solely on duct pressure and require no external power supply. Each regulator shall be capable of being field adjusted to the required airflow setpoint, as indicated on the schedule, by twisting the rotating ring to the corresponding airflow set value. The device shall be rated for use in air temperatures ranging from 14° to 140°F (-10° to 60°C).

Constant Airflow Regulators shall be capable of maintaining constant airflow within ± 3 CFM (5 m³/h) for nominal airflow ≤ 30 CFM (50 m³/h) and $\pm 10\%$ for nominal airflow > 30 CFM (50 m³/h) throughout the target operating pressure range of 0.2 to 1.0 in. w.g. (50 to 250 Pa) differential pressure. Sound power levels shall not exceed those for each size and CFM rating as scheduled.

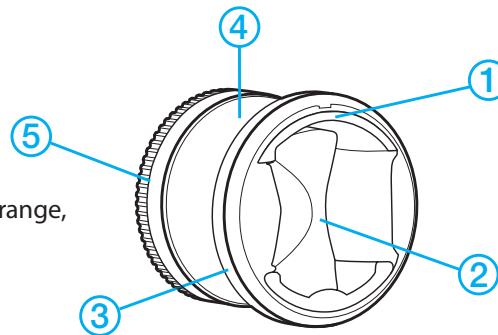
Dimensions



FRONT VIEW

SIDE VIEW

Ø Duct Diameter	ØN	ØB	E	F	A	Weight
4" (100 mm)	3.62" (92 mm)	4.13" (105 mm)	0.55" (14 mm)	0.51" (13 mm)	2.76" (70 mm)	0.26 lbs (0.12 kg)
5" (125 mm) 10-50 CFM	4.57" (116 mm)	5.20" (132 mm)	0.55" (14 mm)	0.51" (13 mm)	2.76" (70 mm)	0.33 lbs (0.15 kg)
5" (125 mm) 60-115 CFM	4.57" (116 mm)	5.20" (132 mm)	0.55" (14 mm)	0.67" (17 mm)	4.33" (110 mm)	0.37 lbs (0.17 kg)
6" (150 mm)	5.79" (147 mm)	6.02" (153 mm)	0.55" (14 mm)	0.75" (19 mm)	4.65" (118 mm)	0.82 lbs (0.37 kg)
8" (200 mm)	7.48" (190 mm)	8.27" (210 mm)	0.79" (20 mm)	0.91" (23 mm)	5.67" (144 mm)	1.31 lbs (0.59 kg)
10" (250 mm)	9.37" (238 mm)	10.32" (262 mm)	0.79" (20 mm)	1.02" (26 mm)	7.05" (179 mm)	2.25 lbs (1.02 kg)



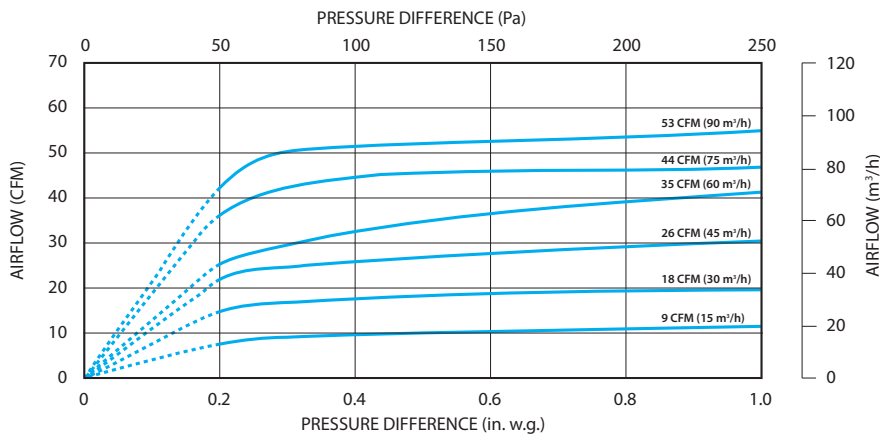
Regulators shall be provided as an assembly consisting of a PC/ABS plastic housing and regulating silicon membrane. A rotating adjustment ring shall allow for setting of airflow to calibrated setpoints. No tools shall be needed to set airflow. Each assembly shall be fitted with a double-lip airtightness seal in elastomer. All regulators must be classified per UL 2043 and carry the UL mark indicating compliance.

All MR Modulo Adjustable Constant Airflow Regulators will require no maintenance and must be warranted for a period of no less than five (5) years. MR Modulo Adjustable Constant Airflow Regulators shall be installed in tight ducting systems in accordance with all applicable codes and manufacturer's instructions.

Airflow Performance Data

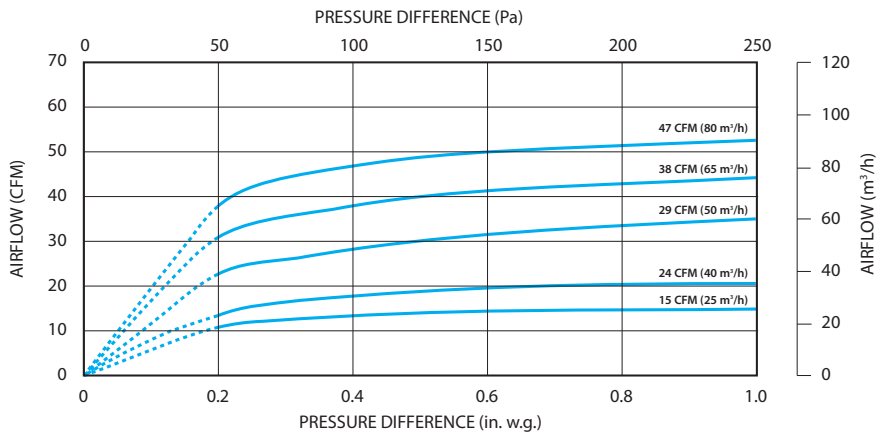
Performance charts reflect airflow variation for each size MR Modulo according to the pressure difference between upstream and downstream of the device. The MR Modulo is designed for the differential operating range from 0.2-1.0 in. w.g. (50-250 Pa). Airflow measurements taken at 68°F (20°C) at 1 atmosphere pressure. The MR Modulo regulates within the following nominal airflow tolerances: ± 3 CFM (5 m³/h) for nominal airflow ≤ 30 CFM (50 m³/h) and $\pm 10\%$ for nominal airflow > 30 CFM (50 m³/h). Sizes are nominal. Product is designed to be inserted into duct of indicated diameter.

4" DIAMETER (100 MM) REGULATING ELEMENT

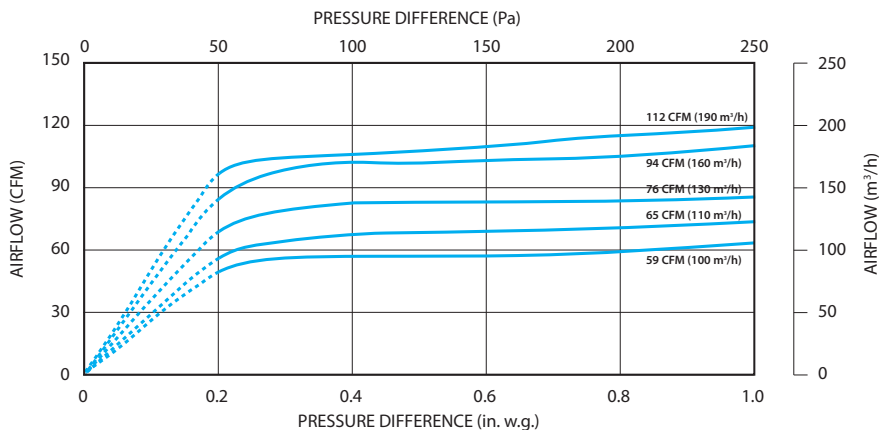


PART NUMBER	AVAILABLE SETPOINTS
11016308	9 CFM (15 m ³ /h)
	12 CFM (20 m ³ /h)
	15 CFM (25 m ³ /h)
	18 CFM (30 m ³ /h)
	21 CFM (35 m ³ /h)
	24 CFM (40 m ³ /h)
	26 CFM (45 m ³ /h)
	32 CFM (55 m ³ /h)
	41 CFM (70 m ³ /h)
	44 CFM (75 m ³ /h)
	47 CFM (80 m ³ /h)
	53 CFM (90 m ³ /h)

5" DIAMETER (125 MM) REGULATING ELEMENT



PART NUMBER	AVAILABLE SETPOINTS
11016309	9 CFM (15 m ³ /h)
	15 CFM (25 m ³ /h)
	18 CFM (30 m ³ /h)
	26 CFM (45 m ³ /h)
	29 CFM (50 m ³ /h)
	35 CFM (60 m ³ /h)
	38 CFM (65 m ³ /h)
	41 CFM (70 m ³ /h)
	44 CFM (75 m ³ /h)
	47 CFM (80 m ³ /h)
	50 CFM (85 m ³ /h)

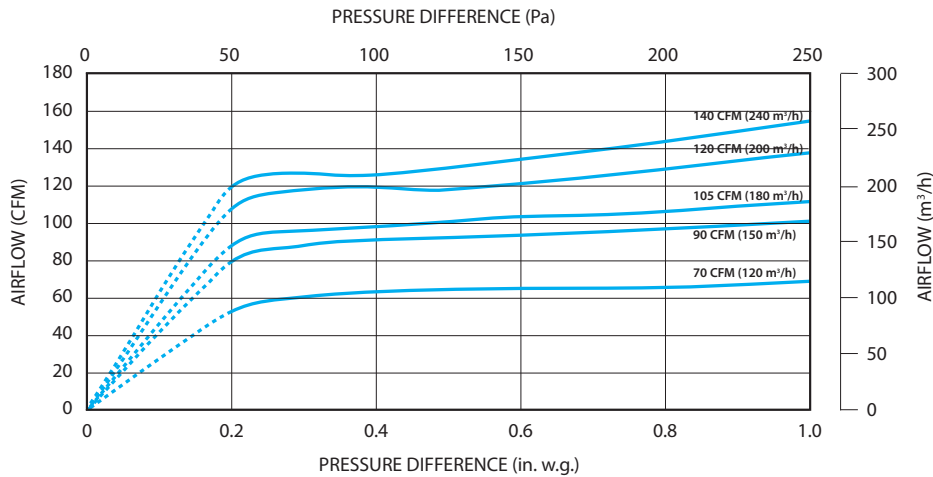


PART NUMBER	AVAILABLE SETPOINTS
11016310	59 CFM (100 m ³ /h)
	65 CFM (110 m ³ /h)
	71 CFM (120 m ³ /h)
	76 CFM (130 m ³ /h)
	82 CFM (140 m ³ /h)
	88 CFM (150 m ³ /h)
	94 CFM (160 m ³ /h)
	112 CFM (190 m ³ /h)

Airflow Performance Data

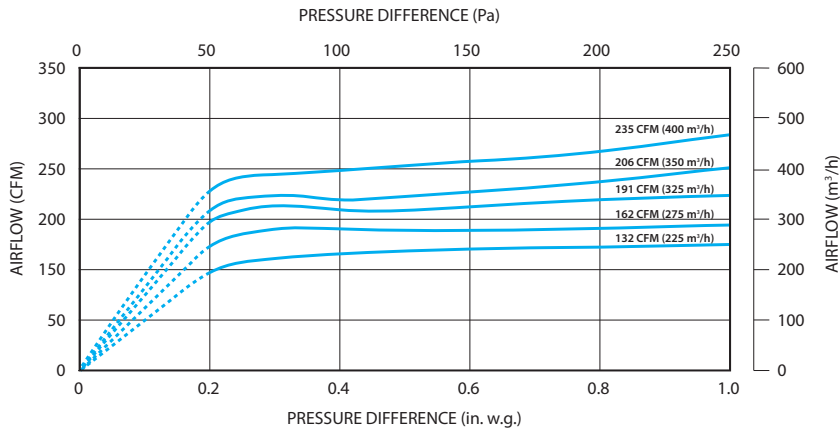
Performance charts reflect airflow variation for each size MR Modulo according to the pressure difference between upstream and downstream of the device. The MR Modulo is designed for the differential operating range from 0.2-1.0 in. w.g. (50-250 Pa). Airflow measurements taken at 68°F (20°C) at 1 atmosphere pressure. The MR Modulo regulates within the following nominal airflow tolerances: ± 3 CFM (5 m³/h) for nominal airflow ≤ 30 CFM (50 m³/h) and $\pm 10\%$ for nominal airflow > 30 CFM (50 m³/h). Sizes are nominal. Product is designed to be inserted into duct of indicated diameter.

6" DIAMETER (150 MM) REGULATING ELEMENT



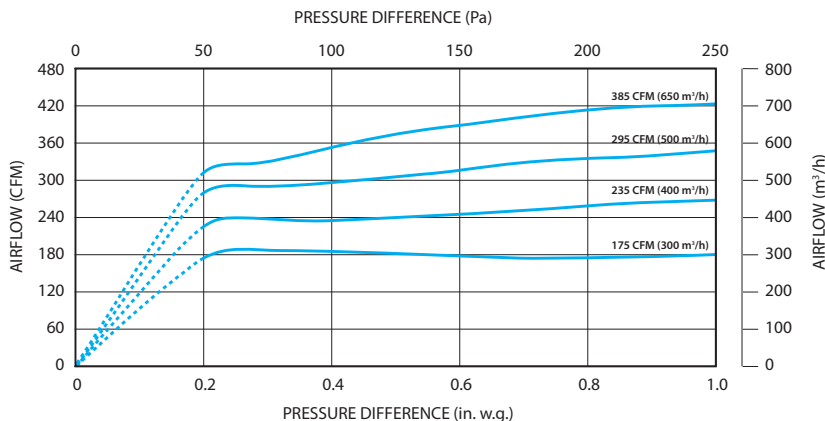
PART NUMBER	AVAILABLE SETPOINTS
11016311	60 CFM (100 m ³ /h)
	65 CFM (110 m ³ /h)
	70 CFM (120 m ³ /h)
	75 CFM (130 m ³ /h)
	80 CFM (140 m ³ /h)
	90 CFM (150 m ³ /h)
	95 CFM (160 m ³ /h)
	100 CFM (170 m ³ /h)
	105 CFM (180 m ³ /h)
	110 CFM (190 m ³ /h)
	120 CFM (200 m ³ /h)
	140 CFM (240 m ³ /h)

8" DIAMETER (200 MM) REGULATING ELEMENT



PART NUMBER	AVAILABLE SETPOINTS
11016313	132 CFM (225 m ³ /h)
	147 CFM (250 m ³ /h)
	162 CFM (275 m ³ /h)
	177 CFM (300 m ³ /h)
	191 CFM (325 m ³ /h)
	206 CFM (350 m ³ /h)
	235 CFM (400 m ³ /h)

10" DIAMETER (250 MM) REGULATING ELEMENT



PART NUMBER	AVAILABLE SETPOINTS
11016314	175 CFM (300 m ³ /h)
	205 CFM (355 m ³ /h)
	235 CFM (400 m ³ /h)
	265 CFM (450 m ³ /h)
	295 CFM (500 m ³ /h)
	325 CFM (550 m ³ /h)
	385 CFM (650 m ³ /h)

Acoustic Data

Sound power levels of noise (Lw) at duct output. The following tables give the sound power levels of noise (Lw) expressed in decibels per octave (dB/oct) as well as the global sound power levels in dB(A) according to the pressure drop. These sound power levels are results of tests carried out by a Dutch independent laboratory (PEUTZ) and are given at the duct outlet. Measures were carried out in accordance with NF EN ISO 3741 and NF EN ISO 5135 norms, with an MR Modulo fitted into a duct with an upstream and downstream straight length equal to 3 diameters.

Ø4" (100 mm)			Differential Pressure DP in. w.g. (Pa)																															
Airflow			0.2 (50)								0.4 (100)								0.8 (150)								1.0 (200)							
m³/h	CFM	L/s	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))
15	9	4	20	26	22	14	15	8	3	23	24	32	31	29	25	18	17	34	31	32	35	34	34	31	29	40	38	32	38	38	43	43	40	48
20	12	6	21	27	22	15	14	8	4	24	25	32	32	30	25	19	17	34	31	33	35	34	34	31	28	40	37	33	39	39	42	42	39	48
25	15	7	22	27	23	16	14	8	6	24	25	33	33	30	26	19	17	35	31	34	36	35	34	31	28	41	36	34	39	40	42	42	38	48
30	18	8	23	27	24	17	14	8	7	25	26	33	33	31	27	20	17	35	31	35	37	36	35	31	27	41	35	36	40	41	42	41	37	48
35	21	10	23	28	24	18	15	8	8	25	27	34	34	31	27	21	17	36	31	35	38	37	35	31	27	42	34	37	41	41	42	41	36	48
45	26	13	24	28	25	19	15	7	9	26	27	34	35	32	28	21	17	37	31	36	39	37	35	31	26	42	34	38	42	42	42	40	35	48
50	29	14	27	30	28	21	15	7	13	28	29	36	37	34	30	23	17	39	31	39	41	40	36	31	25	44	32	42	45	45	42	39	32	49
55	32	15	26	29	27	20	15	7	11	27	29	35	36	34	29	22	17	38	31	38	40	39	36	31	25	43	32	40	44	44	42	40	33	49
60	35	17	28	31	28	22	15	7	14	29	30	36	38	35	30	24	18	40	31	40	42	41	37	32	24	45	31	43	46	46	42	39	31	50
65	38	18	27	30	27	22	16	7	14	29	30	36	37	34	31	24	18	39	31	40	42	40	37	32	25	44	32	43	46	45	43	39	32	50
70	41	19	26	29	27	22	16	8	14	28	30	36	37	34	31	24	18	39	32	40	41	39	38	33	25	44	33	44	45	44	43	40	32	49
75	44	21	26	28	26	21	17	8	14	28	30	36	36	33	32	25	18	39	32	41	41	39	38	33	26	44	34	45	45	44	44	41	33	50
80	47	22	24	27	24	21	18	9	14	27	30	37	35	32	33	26	18	38	33	42	40	38	40	34	27	45	36	46	44	42	46	42	35	50
90	53	25	23	26	24	20	18	10	14	27	31	37	34	32	34	26	18	39	34	42	39	37	40	35	27	45	37	47	44	42	47	42	35	51

Ø5" (125 mm)			Differential Pressure DP in. w.g. (Pa)																																			
Airflow			0.2 (50)									0.4 (100)									0.8 (150)									1.0 (200)								
m³/h	CFM	L/s	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))				
15	9	4	32	23	22	19	16	4	2	24	29	29	28	28	33	15	15	36	31	31	32	31	36	26	24	39	33	32	35	34	47	37	32	49				
25	15	7	32	25	23	20	17	5	5	26	31	31	30	29	33	17	15	36	33	33	34	33	36	28	24	40	35	35	38	37	45	37	32	47				
30	18	8	32	26	24	21	17	6	6	26	32	32	31	30	32	18	15	37	34	34	36	34	36	28	24	41	35	36	39	38	43	37	32	47				
45	26	13	33	29	26	22	19	8	10	28	34	35	35	32	32	21	16	38	36	38	39	37	37	30	24	43	37	41	44	42	42	37	31	48				
50	29	14	33	30	27	23	19	9	12	29	35	36	36	33	32	22	17	38	36	39	41	38	37	30	24	44	38	42	45	44	42	38	31	49				
60	35	17	34	32	28	24	20	11	15	30	36	38	38	34	32	24	17	40	38	42	43	40	38	32	24	46	39	45	49	46	43	38	30	51				
65	38	18	34	33	29	24	20	12	16	31	37	39	39	35	32	25	17	40	39	43	45	41	38	32	24	46	40	46	50	48	44	38	30	52				
70	41	19	34	34	30	25	21	13	18	32	38	40	40	35	32	26	18	41	39	44	46	42	39	33	24	47	41	48	52	49	45	38	30	53				
75	44	21	34	35	31	25	21	14	19	32	39	42	41	36	32	27	18	42	40	46	47	44	39	33	24	48	42	49	53	50	46	39	29	54				
80	47	22	35	36	31	26	22	14	20	33	39	43	43	37	32	29	18	43	41	47	49	45	39	34	24	49	42	51	55	52	47	39	29	56				
85	50	24	35	37	32	27	22	15	22	34	40	44	44	37	32	30	19	44	42	48	50	46	40	34	24	50	43	52	56	53	48	39	29	57				
90	53	25	35	38	33	27	23	16	23	35	41	45	45	38	32	31	19	45	42	49	51	47	40	35	24	51	44	54	58	54	48	39	29	59				
95	55	26	36	39	34	28	23	17	25	36	42	46	46	39	33	32	19	46	43	51	53	48	40	36	24	53	45	55	60	56	49	39	28	60				

Ø5" (125 mm)			Differential Pressure DP in. w.g. (Pa)																															
Airflow			0.2 (50)								0.4 (100)								0.8 (150)								1.0 (200)							
m³/h	CFM	L/s	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))
100	59	28	36	35	32	30	25	16	14	34	43	43	42	39	36	31	23	44	46	45	47	45	41	38	32	50	48	48	51	50	46	44	39	54
110	65	31	36	35	31	30	25	17	15	34	43	43	42	39	36	31	24	44	47	46	47	45	42	38	32	50	50	48	51	50	47	45	40	55
120	71	33	36	34	31	30	25	18	15	34	44	43	42	40	36	31	24	44	48	46	47	46	43	39	33	50	52	49	52	51	48	45	40	55
130	76	36	37	34	31	29	25	18	16	34	44	42	41	40	37	32	25	44	50	47	47	46	43	40	33	51	54	50	52	51	49	46	41	56
140	82	39	37	34	31	29	25	19	17	34	45	42	41	40	37	32	25	45	51	47	47	47	44	40	34	51	56	51	52	52	50	47	42	57
150	88	42	37	34	31	29	24	20	17	34	45	42	41	41	37	33	26	45	52	47	47	47	45	41	34	52	58	52	53	53	51	48	42	58
160	94	44	38	34	31	29	24	20	18	34	46	42	41	41	38	33	26	46	54	48	47	48	46	42	35	53	61	53	53	54	53	49	43	59
190	112	53	39	33	31	29	24	22	20	34	47	41	41	43	39	35	28	46	58	49	48	50	48	44	37	54	67	57	54	56	56	51	46	62

Acoustic Data

Sound power levels of noise (Lw) at duct output. The following tables give the sound power levels of noise (Lw) expressed in decibels per octave (dB/oct) as well as the global sound power levels in dB(A) according to the pressure drop. These sound power levels are results of tests carried out by a Dutch independent laboratory (PEUTZ) and are given at the duct outlet. Measures were carried out in accordance with NF EN ISO 3741 and NF EN ISO 5135 norms, with an MR Modulo fitted into a duct with an upstream and downstream straight length equal to 3 diameters.

Ø6" (150 mm)			Differential Pressure DP in. w.g. (Pa)																																							
Airflow			0.2 (50)										0.4 (100)										0.8 (150)										1.0 (200)									
m³/h	CFM	L/s	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))								
110	65	31	31	31	30	24	19	10	12	33	36	37	40	34	31	25	17	40	38	40	44	39	37	32	26	45	39	43	48	44	43	38	33	52								
120	70	33	31	31	30	24	19	11	13	32	37	38	40	34	31	25	17	41	39	41	44	40	37	32	26	46	41	44	48	44	43	39	33	53								
130	75	36	31	31	30	24	19	11	13	31	38	38	40	35	32	26	18	41	41	42	44	40	38	33	26	46	42	45	49	44	43	39	33	53								
140	80	39	31	31	30	25	20	11	13	31	39	39	40	36	32	26	18	41	42	43	45	40	38	33	26	46	44	47	49	45	44	39	33	54								
150	90	42	31	31	30	25	20	11	13	31	40	40	40	36	33	26	18	41	43	44	45	41	39	33	26	46	46	48	49	45	44	39	33	55								
160	95	44	31	31	30	26	20	11	13	31	42	41	39	37	33	27	19	42	44	45	45	41	39	33	26	47	47	49	50	45	44	40	33	56								
170	100	47	31	31	30	26	21	12	14	31	43	41	39	38	34	27	19	42	46	46	45	42	40	34	27	47	49	51	50	45	45	40	33	56								
180	105	50	32	31	30	27	21	12	14	32	44	42	39	39	34	27	20	43	47	47	45	42	40	34	27	48	50	52	50	45	45	40	33	57								
190	110	53	31	31	30	27	22	13	14	32	43	42	39	39	35	28	21	43	47	47	45	42	40	34	27	48	50	51	50	45	45	40	33	57								
200	120	56	31	31	30	27	22	13	14	32	43	42	39	39	35	29	21	43	47	46	45	42	40	35	28	47	50	51	49	45	44	40	33	56								
210	125	58	30	31	31	28	22	14	14	32	43	41	39	39	36	30	22	43	47	46	45	42	40	35	28	47	50	50	49	45	44	40	34	56								
240	140	67	29	31	31	28	23	17	13	33	42	40	40	40	37	32	25	44	46	44	44	42	40	37	30	48	50	48	48	44	43	40	34	55								

Ø8" (200 mm)			Differential Pressure DP in. w.g. (Pa)																																			
Airflow			0.2 (50)									0.4 (100)									0.8 (150)									1.0 (200)								
m³/h	CFM	L/s	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))				
225	132	63	29	27	24	23	18	11	13	27	39	39	36	33	31	26	18	39	43	42	41	39	37	32	24	44	46	45	46	44	42	38	29	49				
250	147	70	30	28	26	24	19	12	13	29	41	40	37	35	33	26	19	40	44	43	42	40	38	32	24	45	47	47	45	44	42	37	28	49				
275	162	76	31	30	27	26	20	13	13	30	42	41	38	38	34	27	20	42	46	45	42	41	38	32	24	45	49	48	45	44	42	36	27	49				
300	177	83	32	32	29	27	21	14	14	31	44	41	39	40	36	28	21	44	47	46	42	42	39	32	23	46	50	50	45	44	42	35	26	49				
325	191	90	34	33	30	29	23	16	14	33	45	42	40	41	37	30	23	44	48	47	44	43	40	34	26	48	51	51	48	45	44	38	28	51				
350	206	97	36	34	31	31	25	18	15	35	46	43	40	42	37	31	25	45	49	48	46	44	42	36	28	49	52	53	52	47	46	40	31	53				
400	235	111	39	37	34	35	28	21	17	38	48	45	42	43	39	34	28	47	51	51	50	47	45	40	32	53	55	57	59	50	50	44	36	58				

Ø10" (250 mm)			Differential Pressure DP in. w.g. (Pa)																																			
Airflow			0.2 (50)									0.4 (100)									0.8 (150)									1.0 (200)								
m³/h	CFM	L/s	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 HZ	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))	125 Hz	250 Hz	500 HZ	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Overall Lw (dB(A))				
300	175	83	38	33	29	25	22	12	12	33	44	38	40	40	31	22	15	42	43	44	42	38	37	29	22	44	43	49	44	36	41	36	30	47				
350	205	97	38	33	30	27	22	13	12	33	46	40	41	41	33	24	17	44	46	46	44	41	38	31	24	46	46	51	46	40	43	38	32	49				
400	235	111	38	34	31	30	23	13	13	34	47	42	42	43	34	26	18	46	49	47	45	44	40	33	26	48	50	52	48	44	45	40	33	52				
450	265	125	37	34	33	33	23	14	13	36	49	44	43	45	36	28	20	47	51	49	47	47	42	35	28	50	54	54	51	49	47	42	35	54				
500	295	139	37	34	34	36	24	15	14	38	50	46	45	47	37	29	22	49	54	51	49	50	43	37	30	53	58	55	53	53	49	44	37	57				
550	325	153	38	36	37	38	26	18	15	40	50	46	45	47	38	31	23	49	53	51	49	50	44	38	31	53	57	55	53	54	50	44	37	57				
650	385	181	40	39	41	42	31	23	18	44	49	46	46	46	40	33	25	50	52	50	50	51	45	39	32	54	55	54	54	55	51	45	38	58				

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P/N: 99 250 & 99 251



P/N: 99 022

Product Description

ALDES Variable Speed Controls are offered as accessories to the line of in-line, wall- and roof-mount fans for air-moving applications that use Shaded Pole, Permanent Split Capacitor (PSC), and AC/DC motors. These economical speed controls are designed to replace obsolete tapped winding or reactive methods of speed control. The full-wave phase control circuitry minimizes power loss, thereby reducing energy requirements. The controls provide variable speed adjustment, allowing the end user to select the desired level of air volume. These models cover a wide range of current ratings (5-15 Amps AC).

Important features such as RFI Filter, Minimum Speed Trimpot, and built-in On/Off Line Switch are standard. These speed controls are available in distributor-type packaging with accessories such as knob, dial plate, mounting hardware, instructions, and individual carton. All models are designed to be mounted into a standard 2" x 4" electrical wall box.

VARIABLE SPEED CONTROL

5, 10 & 15 AMP CURRENT RATINGS

FAN CONTROLS **SPEC & IOM**



READ AND SAVE THESE INSTRUCTIONS

FEATURES

- Built-In On/Off AC Line Switch
- Minimum Speed Trimpot
- RFI Filter (Provides RFI and EMI Suppression)
- All Models Mount in a Standard 2" x 4" Electrical Wall Box
- Agency Approvals:
 - UL Listing/Recognition
 - CSA Certified
 - ISO-9001: 2000 QMS Certified

ELECTRICAL RATINGS

Current Ratings: 5-15

Voltage Ratings: 120 VAC - 50/60 Hz

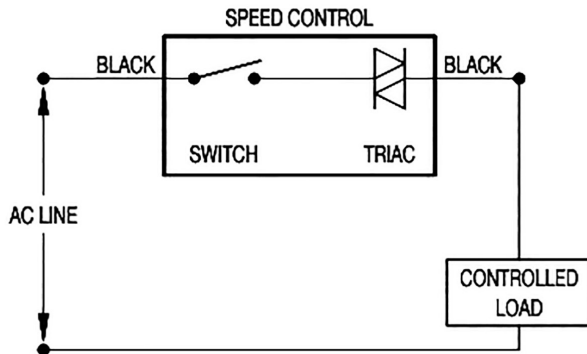
Typical Applications: Fans, Fireplace Blowers, Humidifiers, Air Conditioners, Ceiling Fans, Attic Fans, Ventilators, and Range Hoods

ELECTRICAL RATINGS AND AGENCY APPROVALS

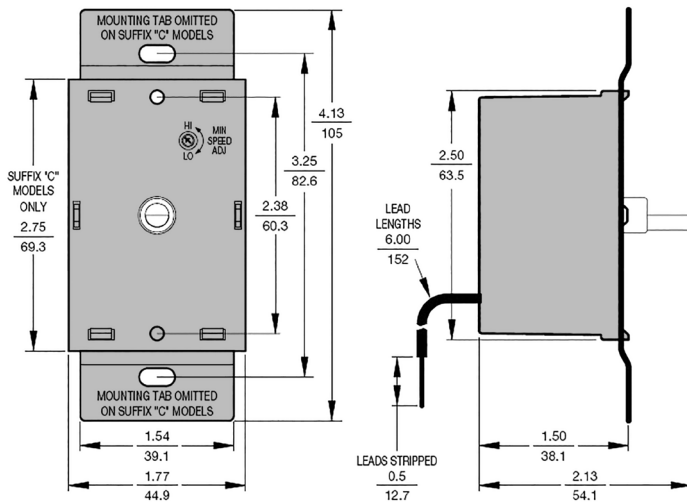
Part Number	AC Line Input Voltage (Volts AC - 50/60 Hz)	Maximum Current Rating (Amps RMS ¹)	Ambient Temperature °F (°C)	Agency Approvals		
				RA US	UL US	CSA US
99 022	120	5	104 (40)		X	X
99 250	120	10	104 (40)		X	X
99 251	120	15	77 (25)	X		

¹ Models rated 10 A and above include mounting kit.

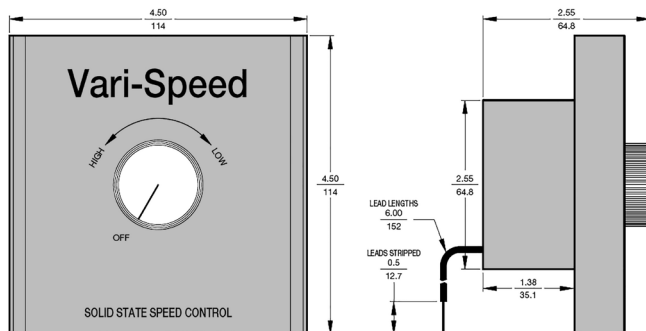
Connection Diagrams



2-Wire Controls with On/Off Switch



Mechanical Specifications (inches/mm) for P/N: 99 022



Mechanical Specifications (inches/mm) for P/N: 99 250 and 99 251

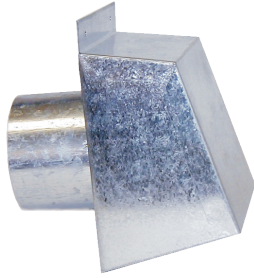
Application Notes

- Radio Frequency Interference (RFI):** All solid-state speed controls generate annoying radio noise on the AM band. Speed controls contain, as standard, a high-gain RFI suppression filter which significantly reduces this interference.
- Low-End Set Point (Minimum Speed):** All 120 Volt input speed controls are factory set to 60 Volts AC output (± 3 Volts), as standard. All controls are factory calibrated using an average responding AC voltmeter. Custom voltage settings are available.
- Motor Suitability:** Motors must be loaded to nearly full capacity with the appropriate fan blade in order to achieve proper speed control. Generally, motor suitability is established by determining motor speed as a function of applied voltage. A motor is deemed suitable if it changes speed linearly over a wide range of voltage. **It is required that all motors contain a built-in thermal overload protector when used with solid-state speed controls.**
- Temperature Test:** The non-sinusoidal output voltage of a solid-state speed control may increase motor heating. Therefore, it is necessary that a temperature test be performed to ensure that the motor is operating within manufacturer's specifications.
- Leads:** All leads are approximately 6" (15 cm) long and stripped 1/2" (1.25 cm).

SAFETY WARNING!

Unit should be installed by a qualified electrician in accordance with the National Electrical Code and other local codes which may apply. This control must be grounded when installed. Failure to follow these instructions may result in electrical shock or a fire hazard. To reduce the risk of fire or electric shock, this control is to be used only with fans marked as suitable for use with solid state speed controls. This control is suitable for mounting in a metal or polymeric field enclosure. These controls must not be used at ratings exceeding those clearly marked on the device.

We are not responsible for any expense, inconvenience or subsequent damage caused by items of our manufacture or sale.



HIGH-PERFORMANCE WALL HOODS

WITH SCREENS OR GRAVITY DAMPERS

ROOF CAPS, WALL HOODS, GRILLES
& DUCT FITTINGS

Product Description

Aldes High-Performance Wall Hoods are designed for use in exhaust or supply ventilation systems and fresh air kits. They are engineered to accommodate high airflow pressure and velocities found in premium fan and dryer vent systems. Wall hoods are available as screened or dampered versions. Each wall hood is designed to maximize airflow and minimize noise.

Construction

Wall Hoods are available in heavy-gauge G90 galvanized steel.

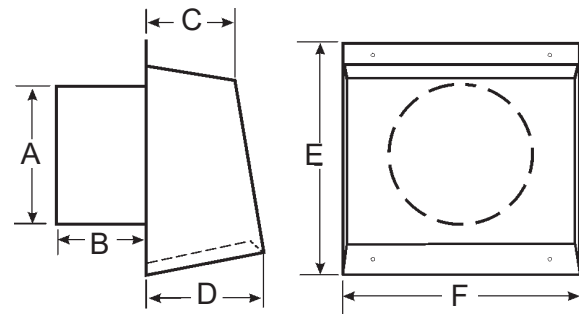
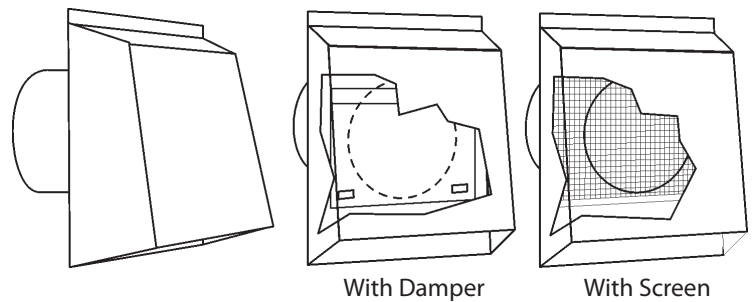
Screened Wall Hoods

1/4" galvanized steel mesh. Suitable for use in exhaust or supply ventilation systems and fresh-air kits.

Dampered Wall Hoods

For use in exhaust ventilation and dryer venting systems. A magnetic-catch damper ensures a tight closure when the fan is not running and eliminates damper flutter in windy conditions. These hoods should be used when backdraft dampers are not present at other locations within the duct system.

Dimensions



MODEL	Galvanized**		Dimensions					
	Dampered*	Screened						
Size	P/N	P/N	A	B	C	D	E	F
4"	22 404	22 304	4"	3"	3.0"	4.5"	8"	6"
5"	22 405	22 305	5"	3"	3.0"	5.0"	9"	8"
6"	22 406	22 306	6"	3"	4.0"	6.0"	10"	9"
8"	22 408	22 308	8"	3"	5.0"	8.0"	12"	11"
10"	22 410	22 310	10"	3"	6.5"	10.0"	14"	13"
12"	22 412	22 312	12"	3"	8.5"	12.0"	16"	15"

*For wall hoods with screens and backdraft dampers, add backdraft damper to screen model.

**Galvanized Steel Items (4" to 8" are 26 gauge; 10" and 12" are 24-gauge).

Materials: Galvanized Steel G-90. Damper: Aluminum sheet, 0.020"

For more information, contact your Aldes sales advisor, visit aldes-na.com, call 1.800.255.7749, or find us on





FSVS140

FILTERING SUPPLY AIR VENTILATORS

VENTERGY® SERIES FANS



Product Description

Ventergy® Series Ventilator Fans represent years of engineering development to combine the energy efficiency and sound performance of a forward-curved fan with the durability and pressure characteristics of a backward-inclined impeller fan.

FSVS Filtering Supply Air Ventilators are highly versatile, continuous-duty rated units for residential applications. They meet ENERGY STAR efficiency criteria for low energy consumption. The FSVS is designed to provide precise amounts of fresh outdoor air to the occupied space or forced AHU duct system.

The FSVS is designed to filter and distribute incoming fresh air and prevent the introduction of contaminants as a result of unwanted infiltration through leaks in the building's envelope. By slightly pressurizing the structure, the FSVS also reduces the risk of backdrafting heating appliances, water heaters, and fireplaces. The quiet, continuous-duty, energy-efficient, external-rotor motor with permanently sealed bearings provides many years of maintenance-free performance.

Construction

The FSVS is constructed of heavy-gauge galvanized steel to prevent corrosion caused by moisture. The cabinet is internally lined with acoustic, closed-cell foam insulation that acts as a vapor barrier. This allows installation directly above living spaces or in unheated plenum spaces without concern for noise or condensation.

Controls

The fan can be operated manually or automatically by a programmable timer, dehumidistat, or other appropriate electronic switch device. The fan may also be operated in conjunction with a variable speed control.

Filters

The FSVS is designed to house a disposable-type 1" pleated MERV 8 filter to comply with ASHRAE 62.2 and ENERGY STAR standards. Another compliant filter option is the permanent, washable, electrostatic type.

Fan and Motor

The fan motor is an energy-efficient, permanent-split-capacitor type with external-rotor design. Totally sealed to protect against moisture and contaminants, it incorporates permanently lubricated sealed bearings and automatic-reset thermal-overload protection. It is designed and certified for continuous duty or intermittent operation.

The fan uses a backward-inclined impeller design that minimizes dust collection on blades. Each fan is statically and dynamically balanced at the factory to eliminate vibration and ensure quiet operation.

Locating and Installing

The compact dimensions and versatile mounting options permit installation above drop ceilings, between ceiling joists, or within a small soffit location. They can be installed horizontally or vertically.

Serviceability

The entire motor and fan assembly is mounted on a drop-down hinged-access panel for simple service and inspection. It can be removed from the fan housing without disassembling the duct connections. The filter/supply air manifold section includes a separate drop-down access panel for filter inspection or removal and airflow rate adjustments of each supply duct airflow regulator without disconnecting the unit from the duct. Tools are not required to access the filters.

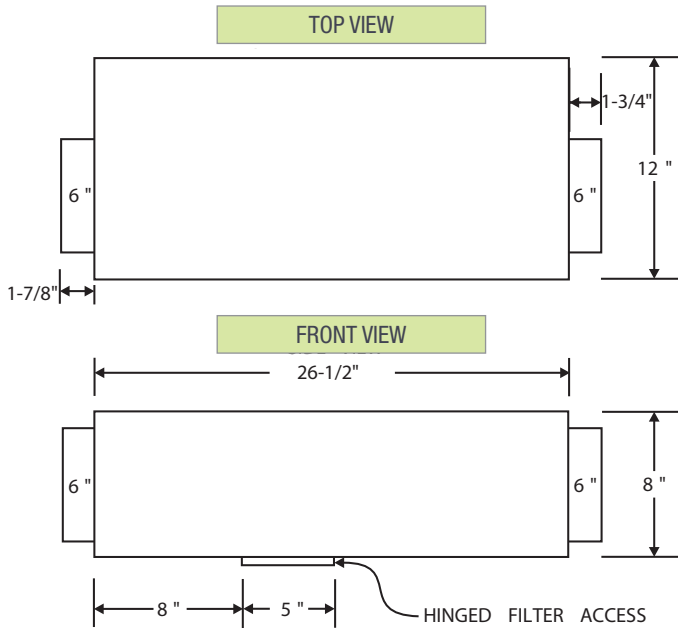
Accessories

Accessory kits are available to facilitate installation and enhance operation. Accessories kits are sold separately. Please visit aldes-na.com, or contact your local Aldes distributor for details.

Performance

Fan airflow and energy performance shall be tested in accordance with HVI procedures.

Dimensions & Performance



ELECTRICAL DATA

115 V, 60 Hz, 41 W, 0.34 A, 2200 RPM

*Above ratings are intended for sizing electrical wiring only.
Actual consumption will be lower.*

MERV 8 pleated filter
or A+2000 electrostatic
permanent filter options

Heavy-gauge G90
galvanized steel construction

Internally
insulated
with acoustic
vapor barrier
insulation

Drop-down hinged
motor and filter
access panels for
easy service

High-efficiency motor
meets ENERGY STAR
performance criteria

FSVS140 ELECTRICAL AND AIRFLOW PERFORMANCE*

Model	Watts at 0.2" Ps	CFM vs. Static Pressure					
		0.0"	0.2"	0.4"	0.6"	0.8"	1.0"
FSVS140	32.3	178	140	110	79	51	22

*Certified airflow rating at 0.2" w.g. is derated from actual test results per HVI Certification procedure 920. The HVI Certified Rate for FSVS140 = 140 CFM.

Recommended Specification

GENERAL The fan shall be continuous-duty type with a backward-inclined centrifugal blower specifically designed for residential and commercial use. The fan shall be safety tested per UL standards and bear the agency listing certified mark. The fan must meet the ENERGY STAR performance criteria for energy efficiency and bear the ENERGY STAR mark.

CONSTRUCTED The housing shall be of a minimum 22-gauge steel with a G90 galvanized coating or baked enamel paint finish. All interior surfaces of the fan housing shall be lined with non-porous, closed-cell foam insulation to allow installation above ceilings and in unheated spaces without concern for condensation or absorption of water. The unit shall not exceed 8" in total height or width to allow mounting within ceiling/floor joist spaces. The blower shall be a centrifugal-type, external-rotor motor with backward-inclined impeller blades. The motor and blower assembly shall be mounted on a drop-down hinged access panel so as to permit removal from the housing without disassembling the ducting connections. The filter must be accessible from a hinged drop-down access panel adjacent to the motor access. The supply air duct connections shall be dimensioned so as to accept constant airflow regulators with a secure fit. The intake and discharge duct dimension shall be nominal 6" round. Mounting brackets shall be provided for attachment to the fan housing, allowing vertical or horizontal installations.

ELECTRICAL: The fan will operate on 115V, 50/60Hz, and single-phase current. The motor will be listed for use with a solid-state speed control.

MOTOR The motor shall be direct-drive, external-rotor, high-efficiency, PSC type with permanently lubricated and sealed ball bearings. The motor shall have automatic thermal-overload protection and must be totally sealed to protect against contaminants and moisture. Naturally vented air-over motors are not acceptable.

FILTER: The fan shall be provided with an approved 1" pleated panel type disposable filter meeting the ASHRAE standard MERV 8 rating. An optional permanent electrostatic filter shall be provided where specified. The filter shall be fully removable without the use of any tools and without disassembling internal partitions.

3 YEAR WARRANTY for entire unit, from date of shipment, against all manufacturing defects, provided the material has been installed and operated per manufacturer's instructions and under normal conditions. Warranty is limited to the repair or replacement of the material upon its return freight paid to our factory. This warranty is not transferable and is limited to the original end user.

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