

FAVXR6C2100–B01 Fresh Air Vent Damper and Digital Control



Product Data

FEATURES AND BENEFITS

The Fresh Air Vent and Digital Controller is installed as part of the home's heating and cooling system to manage the quantity of fresh air introduced into the structure.

With today's homes being built "tighter" for improved energy efficiency, many states and provinces now require mechanical ventilation as part of the building code. In these tight homes, contaminants including radon, formaldehyde, household chemicals, smoke and other odors can build up to levels that exceed safe thresholds.

The Fresh Air Vent system digital controller provides the user with adjustable flexibility to precisely set up and manage fresh air to reduce or dilute the volume of "stale" air in the home - at an affordable price point.

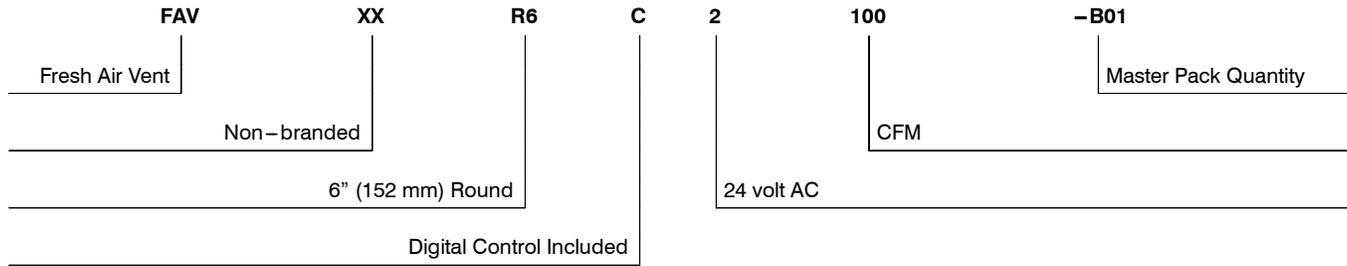
The system allows fresh air to be introduced throughout the year, except in extreme temperature and humidity conditions. Except when used in "time only" mode, the controller does not allow the damper to open when outdoor temperatures are above 100°F (38°C), below 0°F (-17°C), or if indoor humidity levels are above 55%, in order to prevent conditions that would have a negative impact on comfort.

The volume of air can be precisely controlled by settings on the damper motor, so applications with fresh air requirements up to 100 cfm (or higher, depending on application) can be achieved.



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MODEL NUMBER NOMENCLATURE



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PHYSICAL DATA

MODEL	FAVXXR6C2100-B01
Duct Length	10-3/4" (273 mm)
Digital Ventilation Controller	Requires 3/4" (19 mm) hole
Damper Round Duct Body	24 Ga. Galvanized
Damper Blade Material	20 Ga. Galvanized
Damper Shaft Material	Aluminum
Duct Connections	Standard 6" (152 mm) round with entering end plain and leaving end crimped
Damper Blade Travel / Stop	90° Adjustable, factory set for fully open
Damper Blade Seals	1/2" (13 mm) width foam seal strips applied to duct interior perimeter to seal blade from outdoors in the closed position
Max. Static Pressure	1.0" WC
Damper Motor Type – Synchronous	Motor is 24 VAC 60 Hz, 6 Watts, 0.41 amp, 4 RPM
Connections	Two 6" (152 mm) wiring pigtails
Damper Control Input	(R,C) 18 to 30 VAC, 1 amp maximum
Damper Control Output	18 to 30 VAC, 1 amp maximum closed contact
Ventilation Modes	Four mode options (See pg. 4) – Time only without temperature and humidity limits – Time only with temperature and humidity limits – Timer – controlled for cold climates – Timer – controlled for warm climates
Ventilation Time	Dial setting from 0 to 60 minutes
Damper Type	Normally closed, power open
Operating Temperature Range for External Environment	-20°F to 140°F (-29°C to +60°C)
Accessories Include	Transformer, ventilation controller, injection molded plastic snap-on motor cover, outdoor thermistor with two 8" (203 mm) wiring pigtails
Shipping Weight	6 lbs. 8 oz (2.9 kg)

ASHRAE 62.2 2013 VENTILATION REQUIREMENTS

House Size		Number of Bedrooms									
		1		2		3		4		5	
Sq. Ft.	Sq. Meters	CFM	L/S	CFM	L/S	CFM	L/S	CFM	L/S	CFM	L/S
<500	<47	30	14	38	18	45	21	53	25	60	28
501 - 1000	47 - 93	45	21	53	24	60	28	68	31	75	35
1001 - 1500	93 - 139	60	28	68	31	75	35	83	38	90	42
1501 - 2000	140 - 186	75	35	83	38	90	42	98	45	105	49
2001 - 2500	186 - 232	90	42	98	45	105	49	113	52	120	56
2501 - 3000	232 - 279	105	49	113	52	120	56	128	59	135	63
3001 - 3500	279 - 325	120	56	128	59	135	63	143	66	150	70
3501 - 4000	325 - 372	135	63	143	66	150	70	158	73	165	77
4001 - 4500	372 - 418	150	70	158	73	165	77	173	80	180	84
4501 - 5000	418 - 465	165	77	173	80	180	84	188	87	195	91

* For 2013, CFM & L/S values shown are used if no Blower Door Test is done. If test is done, leakage values can be deducted from the above.

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ASHRAE 62.2 2010 VENTILATION REQUIREMENTS

House Size		Number of Bedrooms									
		0 - 1		2 - 3		4 - 5		6 - 7		>7	
Sq. Ft.	Sq. M	CFM	L/S	CFM	L/S	CFM	L/S	CFM	L/S	CFM	L/S
≤1500	<139	30	14	45	21	60	28	75	35	90	42
1501 - 3000	140 - 278	45	21	60	28	75	35	90	42	105	50
3001 - 4500	279 - 418	60	28	75	35	90	42	105	50	120	57
4501 - 6000	419 - 557	75	35	90	42	105	50	120	57	135	64
6001 - 7500	558 - 697	90	42	105	50	120	57	135	64	150	71
>7500	>697	105	50	120	57	135	64	150	71	165	78

*Airflow in CFM = [House Area in Sq Ft x 0.01] + [No. Bedrooms + 1 x 7.5] Use the Number of Bedrooms (Plus 1) or the Number of Occupants, whichever is larger.

*Additional ventilation may be required for pets, hobbies, fireplaces and attached garage, etc.

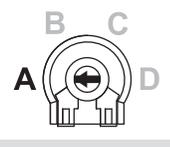
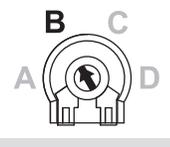
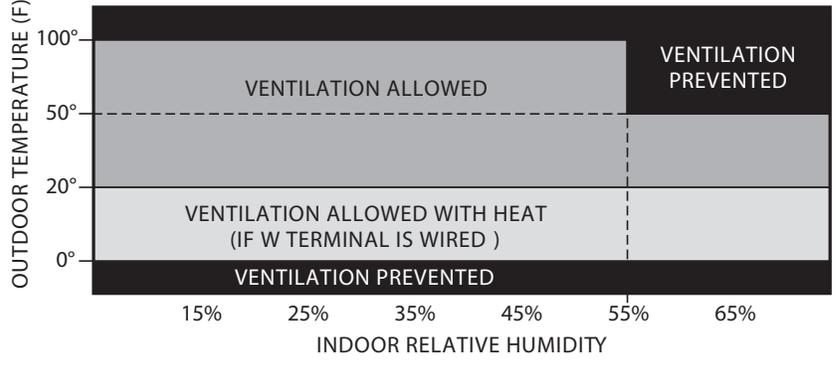
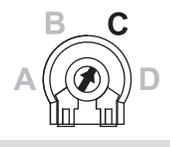
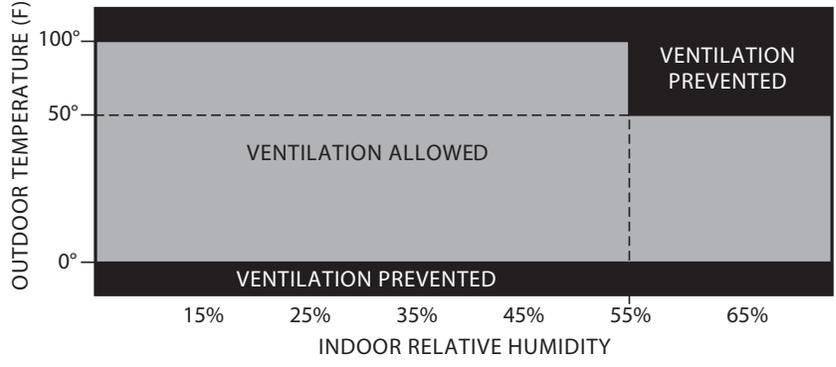
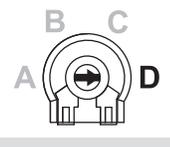
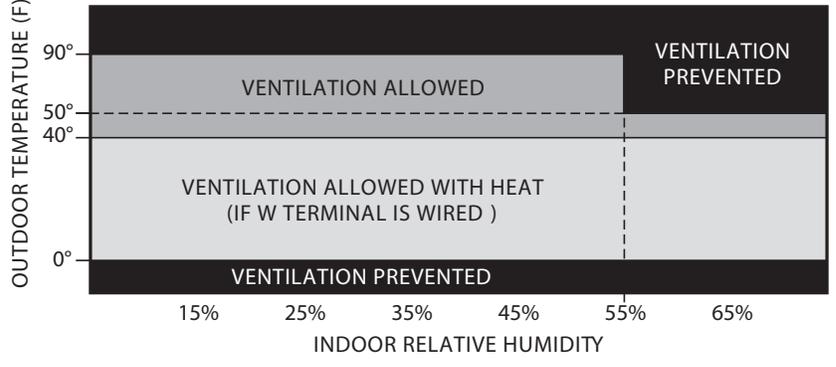
MIXED AIR TEMPERATURE CALCULATION

$$\frac{\left(\text{Outside CFM} \times \text{Outside Temp (F}^\circ\text{)} \right) + \left(\text{Indoor CFM} \times \text{Return Air Temp (F}^\circ\text{)} \right)}{\text{Total CFM}} = \text{Final Return Air Temp}$$

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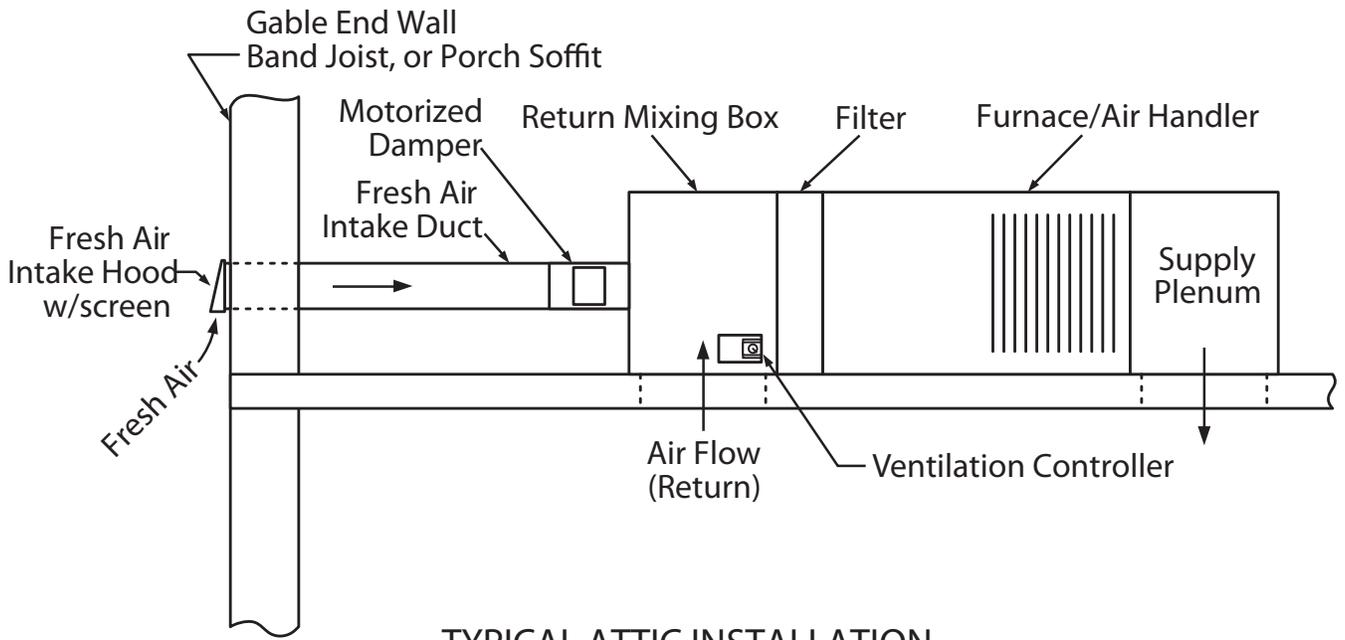
MODE SELECTION OPTION

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Position	Description	Chart
<p>A (Time Only)</p> 	<p>Timer controlled ventilation.(No temperature or humidity limits) See note below before selecting this mode.</p>	<p>This setting can be calculated with ASHRAE 62.2-2010 standard. (Temperature and humidity sensors are ignored.)</p>
<p>B (Default)</p> 	<p>Timer controlled ventilation with humidity and temperature limits. (Recommended setting)</p>	
<p>C</p> 	<p>Timer controlled ventilation with humidity and temperature limits. See note below before selecting this mode.</p>	
<p>D (Warm Climate)</p> 	<p>Timer controlled ventilation with humidity and temperature limits. See note below before selecting this mode.</p>	

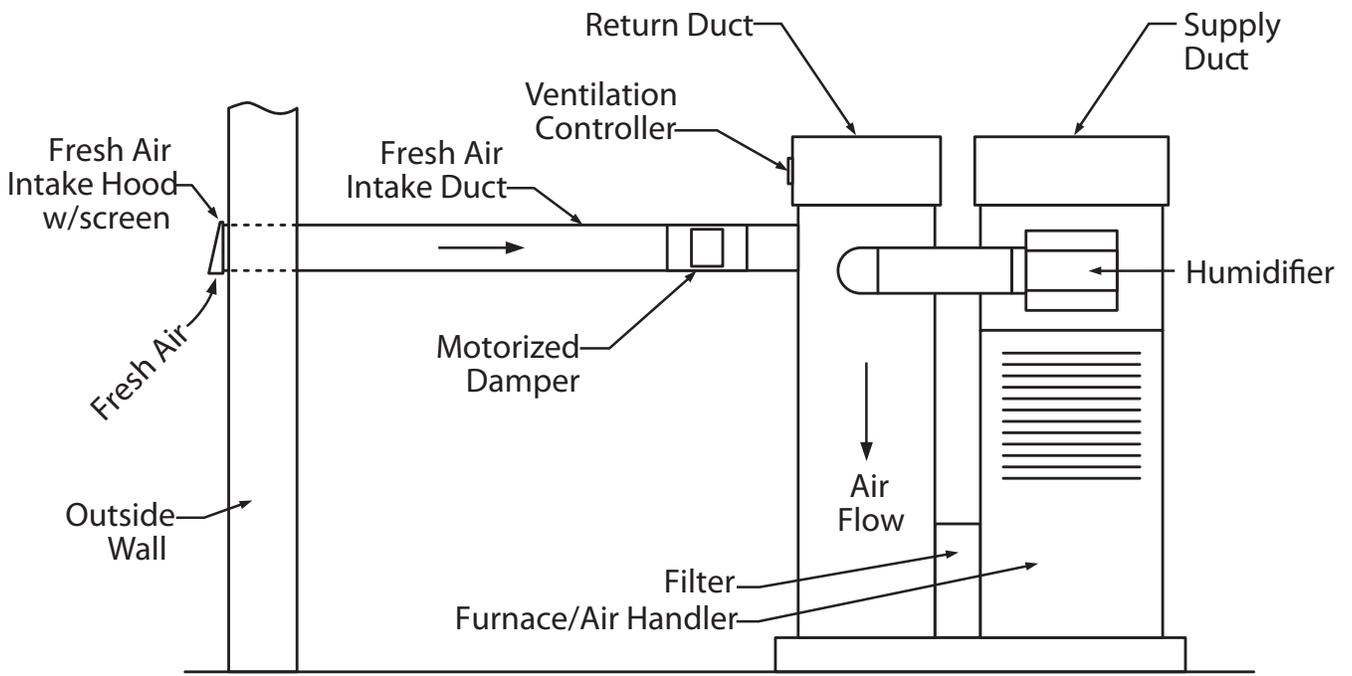
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NOTE: The unit is shipped with mode B pre-scheduled. This is the recommended setting. Use of Modes A and C may result in cold air discharge temperatures. Modes A and C should be only used when a mixed air temperature calculation is completed and result in air temperatures that do not fall below recommended limits. If Mode D is selected, and outside design temperature is below 40° F, then ventilation may be limited.



TYPICAL ATTIC INSTALLATION

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TYPICAL BASEMENT INSTALLATION

A09026

