

ENGINEERING DATA



Model FAD

FAD Fresh Air Damper 4" – 12" Models

Part No. 46590504, 46590505, 46590506, 46590507, 46590508, 46590510 and 46590512



ITEMS INCLUDED IN KIT

- FAD damper, 4" through 12" size
- 3-wire harness with modular damper connector

OPTIONAL ACCESSORIES



- The Fresh Air Ventilation Control™ (FAVC): interactively works with residential HVAC system thermostat, in conjunction with the central fan air handler system to periodically introduce controlled amounts of fresh air into the home. The FAVC is designed to provide fresh air ventilation all year long keeping energy conservation, indoor air quality and comfort in mind.
- E-Sensor: plug 'n play duct-mounted module senses outdoor temperature and dewpoint, used to inhibit ventilation during extreme outdoor weather conditions. Adjustable setpoints for minimum allowable outdoor temp, max allowable outdoor temp, and max allowable outdoor dew point (not simply RH). No external transformer normally required. Interfaces with system and powered by modular connection in series with damper cable, includes interface cable.
- T-Sensor: same features and platform as E-Sensor, but with min and max allowable outdoor temperature setpoints only.
- C-Sensor: Current sensor compatible with HHSC+ Auxiliary/makeup air input, used to provide makeup air by sensing operation of exhausting devices such as dryers, bath fans and range hoods. Passive device with no external power requirement.
- P-Sensor: Duct-mounted differential pressure switch compatible with HHSC+ inputs, similar use as C-Sensor, adjustable setpoint, may be installed on positive or negative pressure ducts. May be used as stand-alone makeup air system sensor.

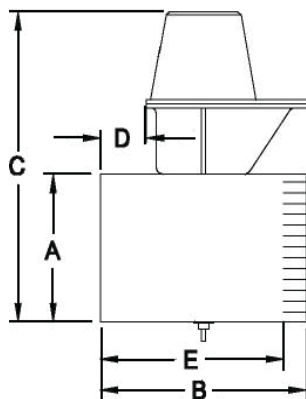
DESCRIPTION

The Field Controls FAD Fresh Air Damper is a 24VAC power-open, power-close motorized air damper designed for installation in a fresh air duct connected to an outdoor air intake hood and a duct fan or the HVAC return plenum, to control the flow of fresh air into the home. The FAD is typically controlled by the HHSC or HHSC+ Ventilation Control as part of the Healthy Home System™ to meet ASHRAE 62.2 and other fresh air ventilation codes and standards, but may also be used in a stand-alone application for either passive or fan-induced fresh air for ventilation or makeup air applications.

FEATURES

- Power-Open, Power Close
- Very low power requirement
- Very low air flow resistance
- Stainless steel body and gate
- Tear-resistant closed-cell foam rubber seal tested 500K+ cycles
- Seal flammability meets FMVSS-302
- Gas Vent Damper motor and circuit board certified 100K+ cycles
- Patented Damper Monitor feature detects and diagnoses failure (with HHSC+ ventilation control)

DIMENSIONAL DATA



A Tube Size (Inches)	B Length (Inches)	C Total Height (Inches)	D (Inches)	E (Inches)	Weight (lbs.)
4	6	9 ⁵ / ₈	⁵ / ₁₆	5	2.5
5	6	10 ⁵ / ₈	⁵ / ₁₆	5	2.70
6	6 ½	11 ⁵ / ₈	1 ¹ / ₈	5 ½	3.10
7	7 ¹ / ₁₆	12 ⁵ / ₈	1 ³ / ₈	6 ¹ / ₁₆	3.55
8	8 ¹ / ₁₆	13 ⁵ / ₈	1 ⁷ / ₈	7 ¹ / ₁₆	4.40
10	12 ¹ / ₈	15 ⁵ / ₈	3 ⁷ / ₈	11 ¹ / ₈	6.95
12	12 ¹ / ₈	17 ⁵ / ₈	3 ⁷ / ₈	11 ¹ / ₈	9



Field Controls
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Visit us at: www.fieldcontrols.com

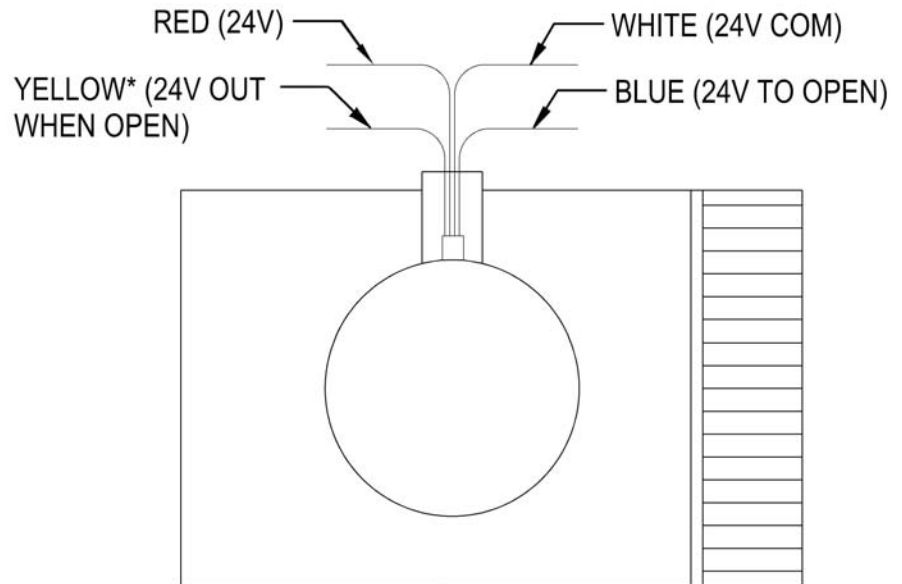
Field Controls LLC reserves the right to modify a product, without prior notice, whether in design, color or specifications, in order to offer at all times a quality product that is highly competitive. Please consult your national and local building codes to find out whether the installation of electrical products requires the services of a certified technician or electrician. Field Controls and Healthy Home System™ are registered Trademarks used under license by Field Controls LLC. All rights reserved.

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PRODUCT SPECIFICATIONS

Housing Material: 22 gage stainless steel
Seal Material: 1/16" cross-linked polyethylene
Voltage 18-30 VAC, 24VAC nominal
Maximum Operating Current 0.1 Amps
Power Draw Requirement 3W at 24 VAC when opening or closing
Timing: 15 seconds Power open, 15 seconds Power close
Operating Ambient Temperature Range -20°F to 150°F (0°C to 60°C)
Operating Humidity Range 5 to 90% RH (non-condensing)
Shipping Temperature Range -20°F to 160°F (-29°C to 71°C)
Recommended Max Velocity: 1000 ft/min
Recommended Max Pressure Differential: 1.0" wc
Leakage: under 0.5% at 0.5" wc
Mounting Restrictions: None, recommended motor at 12:00 if horizontal

FAD DAMPER CONTROL WIRING



*4-WIRE HARNESS ONLY, INCLUDED WITH HHSC+ CONTROL

DAMPER SIZING INFORMATION

Negative Return Air Static Pressure		.025		.05		.1		.15		.2		.25		.3		.35	
Damper & Intake Hood Size	Equivalent Ft of Duct Length	Flex Duct	Smooth Pipe	Flex Duct	Smooth Pipe	Flex Duct	Smooth Pipe	Flex Duct	Smooth Pipe	Flex Duct	Smooth Pipe	Flex Duct	Smooth Pipe	Flex Duct	Smooth Pipe	Flex Duct	Smooth Pipe
FC 4 inch Fresh Air Damper 4 inch Intake Hood	10	23	28	32	40	45	57	56	70	64	80	72	90	79	98	85	106
	30	19	23	26	33	37	47	46	57	53	66	59	74	65	81	70	88
	50	16	20	23	29	33	41	40	50	46	58	52	64	57	71	61	76
FC 5 inch Fresh Air Damper 6 inch Intake Hood	10	38	48	54	67	76	95	94	117	108	135	121	151	132	165	142	178
	30	32	40	45	56	64	80	78	97	90	113	101	126	110	138	119	149
	50	28	35	39	49	56	70	68	85	79	99	88	110	97	121	104	130
FC 6 inch Fresh Air Damper 6 inch Intake Hood	10	51	64	72	90	102	128	126	157	145	181	162	202	177	221	191	239
	30	45	56	63	79	89	111	109	136	126	157	141	176	154	193	166	208
	50	40	50	57	71	80	100	98	122	113	141	126	158	138	173	150	187
FC 7 inch Fresh Air Damper 8 inch Intake Hood	10	87	109	123	154	174	218	213	266	246	308	275	344	301	377	326	407
	30	73	91	103	129	146	183	179	224	207	258	231	289	253	316	273	342
	50	64	80	91	113	128	160	157	196	181	227	203	254	222	278	240	300
FC 8 inch Fresh Air Damper 8 inch Intake Hood	10	98	123	139	174	197	246	241	301	278	348	311	389	341	426	368	460
	30	87	109	123	154	174	218	214	267	246	308	275	344	302	377	326	407
	50	79	99	112	140	158	197	194	242	223	279	250	312	274	342	295	369
FC 10 inch Fresh Air Damper 10 inch Intake Hood	10	148	185	210	262	297	371	363	454	420	525	469	586	514	642	555	694
	30	135	169	191	239	270	338	331	414	382	478	427	534	468	585	506	632
	50	125	156	177	221	250	312	306	383	354	442	395	494	433	541	467	584
FC 12 inch Fresh Air Damper 12 inch Intake Hood	10	214	267	302	378	427	534	523	654	604	755	676	845	740	925	799	999
	30	195	243	275	344	389	487	477	596	550	688	615	769	674	843	728	910
	50	180	225	254	318	360	450	441	551	509	636	569	711	623	779	673	842

PROJECT INFORMATION

Quoted by:	Date:
Project:	Remarks:
Quantity:	
Model:	
Site:	
Architect:	
Engineer:	
Contractor:	



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