HOLYOAKE
AIR MANAGEMENT SOLUTIONS | by price

Diffuser VAV Swirl

- High induction swirl diffusers with radial distribution
- 24Vac control as standard (240Vac option available)
- Modulating 0-10V DC control operation
- Pressed steel fascia with fixed swirl pattern blades
- CFPP600-24 blade or CFPP600-30 blade models
- Premi-Aire™ R1.2 thermally rated housing plenum
  Low profile option (250mm) available
- Powder coat finish standard white RAL 9003 or as selected

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CFPP-VAV
Ceiling Slot Swirl VAV Diffuser

Model: CFPP-VAV Diffuser

The Holyoake CFPP-VAV is an externally controlled pressure dependant VAV diffuser. It comes complete with an adjustable aerodynamic control damper, positioned by a 24Vac variable actuator via a 0-10 V DC control signal.

VAV control of the diffuser is via a room thermostat and building management system BMS (supply and installation by others).

Designed to control the temperature in a space by having the ability to change the supply air volume between a Vmin and Vmax, as detailed in the performance data.

As standard the CFPP-VAV is suitable for lay-in applications into a typical 600mm ceiling grid and comprises of the following:

- **CFPP 24 or CFPP 30 radial blade swirl difuser**
- **Premi-Aire™ pre-insulated VAV housing**
- **Aerodynamic air control damper**
- **24Vac modulating actuator with 0-10V DC control signal**

The CFPP-VAV is one of the strongest performing diffusers on the market with proven induction technology, strong ceiling effect and, capable of handling a wide range of air flows.

Using the CFPP range of radial blade swirl diffusers this VAV diffuser provides a highly turbulent inductive swirl pattern which achieves strong room air induction, reducing draughts and provides even room temperature gradients.

The complete CFPP-VAV assembly, including diffuser, VAV housing, damper and actuator, is a light weight 9.6kg.

Installation

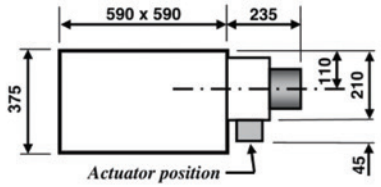
Installation is simple due to the light weight, square, lay-in design. The CFPP-VAV assembly can easily be placed into the T-Rail ceiling grid and the supply duct connected to the side entry damper spigot.

Construction

The CFPP-VAV-E face plate is powder coated, zincalume® steel and complete with a perforated center for room temperature sensing and IR Remote Control. The plenum housing is built from Premi-Aire™ R1.2 thermall rated duct board and is complete with a galvanised steel side entry connecting spigot and an aluminium single aerodynamic air control blade damper. A 24Vac actuator and controls positioned for easy access for wiring and maintenance.

CFPP-VAV 600 24

CFPP-VAV 600 30



TECHNICAL DATA	
Swirl Type	CFPP600-24 or CFPP600-30
Box Type	Premi-Aire™
Thermal Rating	R1.2
Control Damper	Aerodynamic control blade
Actuator	24Vac
Spigot Diameter	250mm
Gross Weight	9.6kg

FEATURES

- Lightweight Premi-Aire™ construction
- Inductive radial swirl air pattern
- 24Vac modulating actuator
- 0-10V DC positioning control
- R1.2 thermally rated housing
- Pressure dependant control

CFPP-VAV 600 24 Performance Data

Inlet Static Pressure 13pa CFPP24-VAV-250-SBD Dia inlet						
Damper Position	Actuator Signal	Flow m^3/s	Throw (m) at Vt(m/s)			NC
			0.25	0.5	0.75	
100% Open	10 VDC	0.175	2.7	1.8	1.1	32
75% Open	7.5 VDC	0.159	2.5	1.6	0.9	31
50% Open	5 VDC	0.106	1.4	0.8	n/a	27
25% Open	2.5 VDC	0.052	0.8	n/a	n/a	26
20% Open	2 VDC	0.042	0.7	n/a	n/a	25
Min Position	0 VDC	0.023	0.3	n/a	n/a	21

Inlet Static Pressure 20pa CFPP24-VAV-250-SBD Dia inlet						
Damper Position	Actuator Signal	Flow m^3/s	Throw (m) at Vt(m/s)			NC
			0.25	0.5	0.75	
100% Open	10 VDC	0.213	3.2	2.3	1.6	36
75% Open	7.5 VDC	0.199	3.0	2.1	1.4	33
50% Open	5 VDC	0.134	2.2	1.3	0.7	29
25% Open	2.5 VDC	0.062	1.0	0.1	n/a	27
20% Open	2 VDC	0.055	0.8	n/a	n/a	26
Min Position	0 VDC	0.030	0.5	n/a	n/a	22

Inlet Static Pressure 25pa CFPP24-VAV-250-SBD Dia inlet						
Damper Position	Actuator Signal	Flow m^3/s	Throw (m) at Vt(m/s)			NC
			0.25	0.5	0.75	
100% Open	10 VDC	0.237	3.4	2.5	1.8	42
75% Open	7.5 VDC	0.221	3.3	2.4	1.7	37
50% Open	5 VDC	0.147	2.3	1.5	0.8	30
25% Open	2.5 VDC	0.073	1.2	0.3	n/a	29
20% Open	2 VDC	0.063	1.0	0.1	n/a	27
Min Position	0 VDC	0.034	0.6	n/a	n/a	23

Inlet Static Pressure 30pa CFPP24-VAV-250-SBD Dia inlet						
Damper Position	Actuator Signal	Flow m^3/s	Throw (m) at Vt(m/s)			NC
			0.25	0.5	0.75	
100% Open	10 VDC	0.258	3.5	2.7	2.0	49
75% Open	7.5 VDC	0.243	3.4	2.5	1.8	44
50% Open	5 VDC	0.162	2.5	1.6	0.9	34
25% Open	2.5 VDC	0.078	1.2	0.3	n/a	30
20% Open	2 VDC	0.068	1.1	0.2	n/a	28
Min Position	0 VDC	0.038	0.6	n/a	n/a	24

Inlet Static Pressure 40pa CFPP24-VAV-250-SBD Dia inlet						
Damper Position	Actuator Signal	Flow m^3/s	Throw (m) at Vt(m/s)			NC
			0.25	0.5	0.75	
100% Open	10 VDC	0.300	3.9	3.0	2.4	57
75% Open	7.5 VDC	0.278	3.7	2.8	2.2	50
50% Open	5 VDC	0.190	2.9	2.0	1.3	36
25% Open	2.5 VDC	0.091	1.3	0.8	n/a	32
20% Open	2 VDC	0.079	1.2	0.3	n/a	29

NOTE The air volume performance for VAV diffusers is dependant on static pressure behind the diffuser being maintained.

CFPP-VAV 600 30 Performance Data

Inlet Static Pressure 13pa CFPP30-VAV-250-SBD Dia inlet						
Damper Position	Actuator Signal	Flow m^3/s	Throw (m) at Vt(m/s) 0.25	0.5	0.75	NC
100% Open	10 VDC	0.200	3.1	2.1	1.5	30
75% Open	7.5 VDC	0.178	2.7	1.8	1.4	29
50% Open	5 VDC	0.104	1.8	1.2	0.7	26
25% Open	2.5 VDC	0.050	1.6	0.6	n/a	24
20% Open	2 VDC	0.045	1.5	0.5	n/a	23
Min Position	0 VDC	0.020	0.4	n/a	n/a	20

Inlet Static Pressure 20pa CFPP30-VAV-250-SBD Dia inlet						
Damper Position	Actuator Signal	Flow m^3/s	Throw (m) at Vt(m/s) 0.25	0.5	0.75	NC
100% Open	10 VDC	0.250	3.8	2.7	2.0	35
75% Open	7.5 VDC	0.222	3.5	2.4	1.7	32
50% Open	5 VDC	0.130	2.0	1.5	0.8	26
25% Open	2.5 VDC	0.062	1.6	0.7	0.3	24
20% Open	2 VDC	0.054	1.6	0.7	0.3	24
Min Position	0 VDC	0.026	0.4	n/a	n/a	20

Inlet Static Pressure 25pa CFPP30-VAV-250-SBD Dia inlet						
Damper Position	Actuator Signa	Flow m^3/s	Throw (m) at Vt(m/s) 0.25	0.5	0.75	NC
100% Open	10 VDC	0.275	3.9	3.0	2.3	40
75% Open	7.5 VDC	0.247	3.8	2.7	2.0	35
50% Open	5 VDC	0.145	2.4	1.7	1.1	27
25% Open	2.5 VDC	0.071	1.7	1.2	0.7	26
20% Open	2 VDC	0.062	1.6	0.7	0.3	24
Min Position	0 VDC	0.030	0.8	n/a	n/a	20

Inlet Static Pressure 30pa CFPP30-VAV-250-SBD Dia inlet						
Damper Position	Actuator Signal	Flow m^3/s	Throw (m) at Vt(m/s) 0.25	0.5	0.75	NC
100% Open	10 VDC	0.300	4.2	3.3	2.6	47
75% Open	7.5 VDC	0.280	3.9	3.0	2.3	43
50% Open	5 VDC	0.180	2.7	1.8	1.4	32
25% Open	2.5 VDC	0.082	1.7	1.2	0.7	28
20% Open	2 VDC	0.070	1.7	1.2	0.7	27
Min Position	0 VDC	0.034	0.8	n/a	n/a	22

Inlet Static Pressure 40pa CFPP30-VAV-250-SBD Dia inlet						
Damper Position	Actuator Signal	Flow m^3/s	Throw (m) at Vt(m/s) 0.25	0.5	0.75	NC
100% Open	10 VDC	0.350	4.5	3.6	2.9	54
75% Open	7.5 VDC	0.320	4.3	3.4	2.7	49
50% Open	5 VDC	0.206	3.1	2.1	1.5	35
25% Open	2.5 VDC	0.100	1.8	1.2	0.7	31
20% Open	2 VDC	0.082	1.7	1.2	0.7	29
Min Position	0 VDC	0.040	1.5	0.5	n/a	23

NOTE The air volume performance for VAV diffusers is dependant on static pressure behind the diffuser being maintained.