

Model: CFPP

The Holyoake CFPP range of Radial Induction Swirl Diffusers have been designed to provide high quality indoor air diffusion. The CFPP comprises of swirl deflection blades that produce a radial airflow pattern, highly turbulent for rapid temperature equalisation, producing stable room space conditions with even temperature gradients.

The CFPP diffuser is suitable for use with increased temperature differentials and in VAV applications, as the ceiling effect is maintained from minimal, through to very high air flow rates.

The CFPP is able to achieve high room air diffusion quality due to the strong induction swirl pattern it produces. This draws room air up into the supply air flow path, which results in mixing at high level, reducing the chance of draughts and optimising room space conditions.

Installation

CFPP Installation

Installation is simple due to the square lay-in type design. The diffuser can be placed into the T-rail system quickly and easily and the supply duct attached, via a circular spigot connection to the specially designed cushion head plenum. Alternatively the diffuser may be conventionally flush mounted, or with the use of a surface mounted installation flange.

CFPP-R Installation

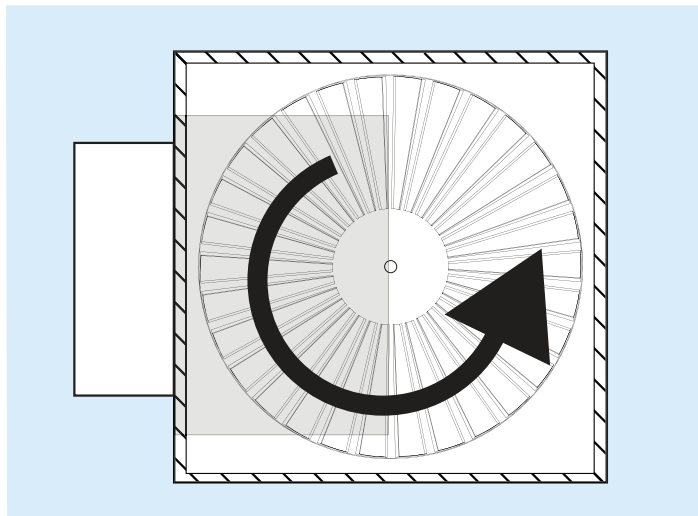
The installation is simple due to the surface mount design. The supply air duct can be attached direct to the circular spigot or fitted with specially designed Holyoake swirl plenum.

Construction

The CFPP is constructed as a single pressing with the body and air pattern elements mechanically formed steel and finished in a high quality white powder coat finish. The CFPP diffuser is both robust and lightweight, making for easy on-site installation.

Features

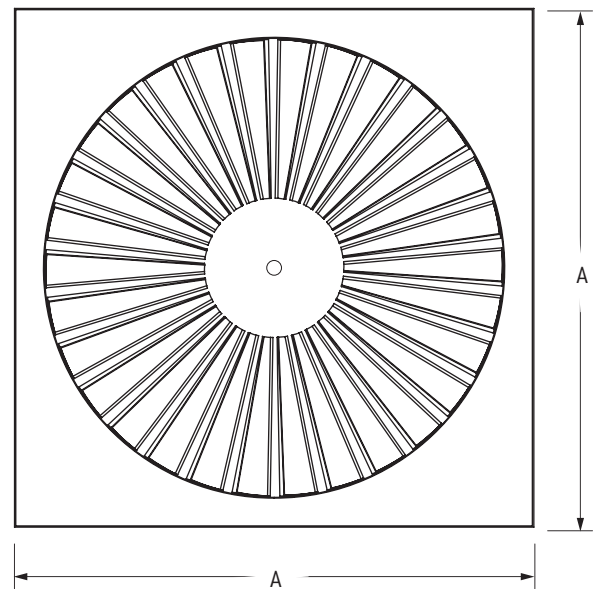
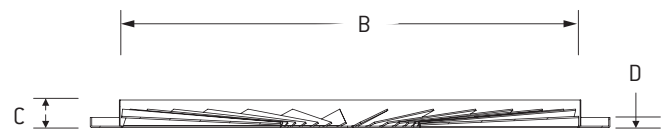
- Strong Ceiling Effect
- Radial Diffusion Pattern
- High Induction Swirl
- Easy Lay-in Installation
- Attractive Appearance



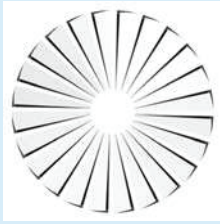
For optimum performance a specifically designed side entry Holyoake Premi-Aire Swirl plenum is recommended.

Due to a policy of continuous development and improvement the right is reserved to supply products which may differ slightly from those illustrated and described in this publication.

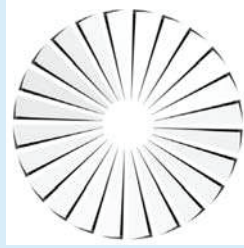
Ceiling Radial Swirl Diffuser



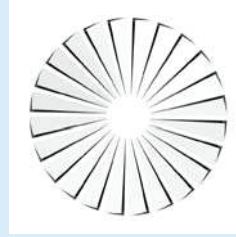
Dimension	A	B	C	D
CFPP 375/24	375	350	30	10
CFPP 400/24	395	350	30	10
CFPP 450/24	445	350	30	10
CFPP 500/24	495	350	30	10
CFPP 600S/24	595	350	30	10
CFPP 600/30	595	530	30	10



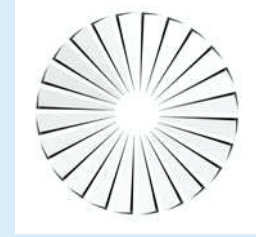
CFPP 375/24



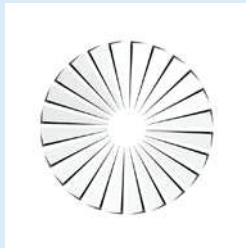
CFPP 400/24



CFPP 450/24



CFPP 500/24



CFPP 600S/24



CFPP 600/30



CFPP 600/30
(rear view)
CFPP600 - A_{eff} 0.0609m²



CFPP 600C/30
(rear view)
CFPP600C - A_{eff} 0.0305m²

Model: CFPP Ceiling Radial Swirl Diffuser

375, 400, 500, 600S/24

Duct Size:	Flow Rate [l/s]	25	50	75	100	125	150	175	200
150	Static Pressure [Pa]	3	6	14	25	35	58	-	-
	Throw [m]	0.2-0.3-0.5	0.4-0.6-1.0	0.6-0.9-1.4	0.8-1.1-1.6	0.9-1.2-1.9	1.1-1.5-2.1	-	-
	NC	<10	11	25	32	37	43	-	-
200	Static Pressure [Pa]	2	5	12	21	34	48	63	-
	Throw [m]	0.2-0.3-0.4	0.3-0.5-0.9	0.5-0.8-1.3	0.9-0.9-1.5	0.8-1.1-1.6	1.0-1.4-1.8	1.2-1.7-2.2	-
	NC	<10	<10	15	23	32	37	42	-
250	Static Pressure [Pa]	2	4	11	19	31	45	59	77
	Throw [m]	0.3-0.4-0.6	0.5-0.7-1.3	0.9-1.2-2.0	1.2-1.6-2.0	1.5-1.9-2.6	1.9-2.6-3.4	2.1-2.9-3.6	2.4-3.1-3.7
	NC	<10	<10	11	18	28	32	36	39

Model: CFPP Ceiling Radial Swirl Diffuser

600C/30

Duct Size:	Flow Rate [l/s]	25	50	75	100	125	150	175	200
150	Static Pressure [Pa]	3	6	14	25	35	58	-	-
	Throw [m]	0.2-0.3-0.5	0.4-0.6-1.0	0.6-0.9-1.4	0.8-1.1-1.6	0.9-1.2-1.9	1.1-1.5-2.1	-	-
	NC	<10	11	25	32	37	43	-	-
200	Static Pressure [Pa]	2	5	12	21	34	48	63	-
	Throw [m]	0.2-0.3-0.4	0.3-0.5-0.9	0.5-0.8-1.3	0.9-0.9-1.5	0.8-1.1-1.6	1.0-1.4-1.8	1.2-1.7-2.2	-
	NC	<10	<10	15	23	32	37	42	-
250	Static Pressure [Pa]	2	4	11	19	31	45	59	77
	Throw [m]	0.3-0.4-0.6	0.5-0.7-1.3	0.9-1.2-2.0	1.2-1.6-2.0	1.5-1.9-2.6	1.9-2.6-3.4	2.1-2.9-3.6	2.4-3.1-3.7
	NC	<10	<10	11	18	28	32	36	39

Notes on Performance Data

- Performance data is based on a specifically designed side entry Premi-Aire cushion head box.
- Listed throw distances are to a terminal velocity (Vt) of 0.75-0.5-0.25 m/s.
- Performance data is based upon a Δt 9°C.
- The NC values are based on a room absorption of 10dB re 10¹² Watts.
- NC values less than NC 10 not shown.
- 600C fitted with velocity enhancer.

Model **CFPP Ceiling Radial Swirl Diffuser**

600/30

Duct Size:	Flow Rate [l/s]	100	125	150	175	200	250	300	350
150	Static Pressure [Pa]	8	10	13	18	25	-	-	-
	Throw (m)	1.2-1.9-3.0	1.6-2.4-3.4	1.8-2.5-3.8	1.9-2.7-3.9	2.2-2.9-4.2	-	-	-
	NC	14	23	33	41	51	-	-	-
200	Static Pressure [Pa]	6	8	11	15	19	30	42	-
	Throw (m)	1.2-1.9-3.0	1.6-2.2-3.3	1.6-2.3-3.6	1.9-2.5-3.8	2.0-2.7-3.9	2.6-3.3-4.7	2.9-3.4-5.0	-
	NC	13	22	30	38	45	34	51	-
250	Static Pressure [Pa]	5	6	9	12	14	21	28	38
	Throw (m)	0.9-1.2-2.4	1.2-1.3-2.7	1.3-1.6-2.8	1.5-2.0-3.0	1.6-2.2-3.5	2.1-3.0-3.9	2.4-3.3-4.5	2.8-3.4-5.1
	NC	<10	14	17	21	27	34	39	46
300	Static Pressure [Pa]	4	5	7	10	12	19	26	35
	Throw (m)	0.7-1.4-2.1	0.9-1.5-2.2	1.1-1.7-2.7	1.3-1.9-2.9	1.4-2.0-3.4	1.9-2.6-3.8	2.2-2.8-4.5	2.6-3.3-4.9
	NC	<10	<10	10	18	21	28	35	42
350	Static Pressure [Pa]	2	3	5	6	8	12	17	28
	Throw (m)	0.6-1.1-2.40	0.8-1.3-2.1	1.0-1.5-2.5	1.3-2.0-2.7	1.4-2.1-3.3	1.9-2.9-3.6	2.2-3.2-4.3	2.5-3.4-4.8
	NC								

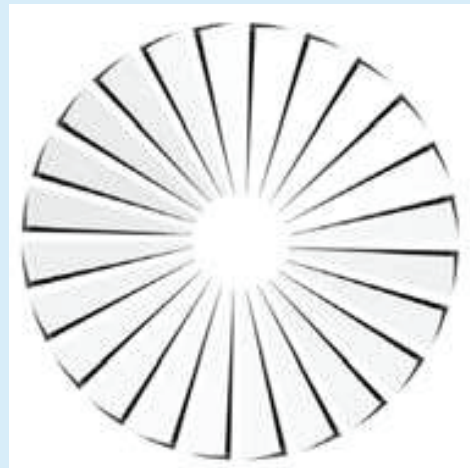
Model: **CFPP Ceiling Radial Swirl Diffuser (square)**

CFPP 300/18

Duct Size:	Flow Rate [l/s]	25	50	80	100	
Nominal Duct Size 150mm Diameter	Static Pressure [Pa]	2	8	18	28	
	Throw (m)	-	-	0.38	0.62	0.82
		0.3	0.3	0.63	0.95	1.10
		0.5	0.5	1.05	1.45	0.72
NC	<10	25	38	43		

Dimension	A	B	C	D
CFPP 300/18	300	200	12	18

Note: Optional plate size (A) of 250 and 350 also available.



CFPP 300/18 blade profile swirl diffuser (Face View)

CFPP – Ceiling Fixed Pattern Pressed Steel Round

Model: CFPP-R Ceiling Radial Swirl Diffuser

Dimension	A	B	C	D
CFPP-R 400/24	400	350	30	10
CFPP-R 500/24	500	350	30	10
CFPP-R 615/24	615	350	30	10
CFPP-R 615/30	615	530	30	10

24 Swirl Blades



CFPP-R 400/24 - Aeff 0.0305m²
CFPP-R 500/24 - Aeff 0.0305m²
CFPP-R 615/24 - Aeff 0.0305m²

30 Swirl Blades



CFPP-R 615/30 - Aeff 0.0609m²

See pages 134D - 135D for CFPP round performance data

Notes on Performance Data

1. Performance data is based on a specifically designed side entry Premi-Aire cushion head box.
2. Listed throw distances are to a terminal velocity (Vt) of 0.75-0.5-0.25 m/s.
3. Performance data is based upon a Δt 9°C.
4. The NC values are based on a room absorption of 10dB re 10¹² Watts.
5. NC values less than NC 10 not shown.