

CRP – Ceiling Round Adjustable Plaque Diffuser

Model: **CRP**

Adjustable Supply Air Pattern, from Horizontal to Vertical Projection.

Manual, or Automatic adjustment via a Thermal Power Pill.

The CRP diffuser is an adjustable supply air plaque diffuser that offers an alternative appearance to the CRA range with visually appealing styling and a strong ceiling effect. All of the diffusers in the CRP range have a circular plaque core to maintain a uniformity of appearance. In standard form the diffuser is manually adjustable to change the supply air pattern from horizontal for cooling to vertical discharge for heating. The adjustment is made by turning the circular plaque core centre to provide horizontal throw in the down position and vertical throw in the up position.

The radial supply air pattern and slim flange of the CRP means the diffuser achieves an excellent ceiling effect. This makes the diffuser suitable for variable air volume applications.

Model: **CRP-T**

The CRP can also be supplied with the ability to change the supply air pattern automatically. This is coded CRP-T. In this form the diffuser will throw air horizontally with a supply air temperature below 24° and air with a temperature above 28° will be thrown vertically. This is achieved with a thermal power pill. No wiring is required (see Note 1 below)*.

Installation

The CRP comes complete with a patented installation system, of spun aluminium construction, designed to provide a perfect finish irrespective of the ceiling design. Each size of diffuser has a complimentary mounting plate that has been designed to fix the diffuser in solid ceilings, suspended ceiling tiles and in the case where no ceiling is present, exposed duct arrangements.

Construction

CRP diffusers are constructed from aluminium spinnings supported by aluminium arms holding the screw thread adjustment mechanism.

Features

- Compact flange for superior ceiling effect.
- Adjustable Supply Air pattern Plaque, for Horizontal, or Vertical Projection.
- Installation mounting plate.
- Spun aluminium construction.
- Automatic thermal option.
- Suitable for use with exposed duct installations.

CRP Size	Weight in Kg
200	1.1
250	1.25
300	1.8
350	2.15
400	2.8
CRP - T	Add 0.8

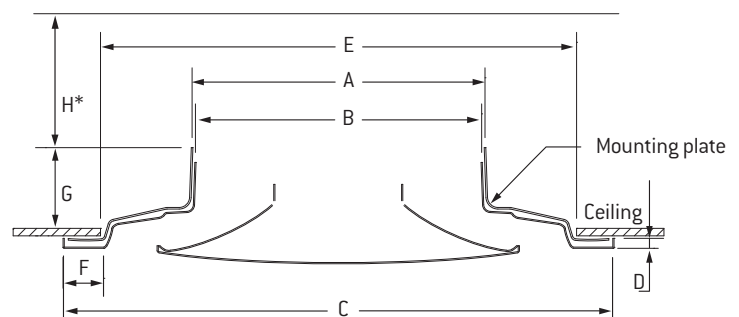
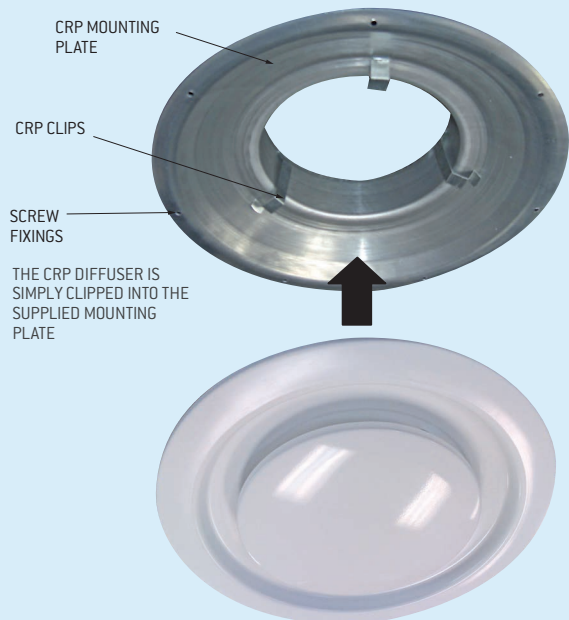
*Notes

1. Thermal power pill on CRP-T versions extends 230mm above the assembly and suitable clearance is required.
2. Seismic restraints required, but not supplied.

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Mounting System



Nominal Duct Size	CRP							
	A	B	C	D	E	F	G	H
200	195	187	387	8	335	27	88	230
250	245	237	452	8	410	27	88	230
300	295	287	552	10	490	41	91	230
350	345	337	600	10	545	41	91	230
400	395	387	650	10	585	41	91	230

Model: CRP

Nominal Duct Size 200mm Diameter	Flow Rate (l/s)	50	75	100	125	150	175	200
	Neck Velocity (m/s)	1.84	2.76	3.68	4.60	5.52	6.44	7.36
	Velocity Pressure (Pa)	2	5	7	12	20	25	32
	Total Pressure (Pa)	17	24	30	38	43	50	55
	Throw (m) @ 0.75 m/s	1.5	1.8	2.3	2.6	2.8	3.0	3.5
	Throw (m) @ 0.50 m/s	2.0	2.3	2.7	3.0	3.3	3.5	3.8
	Throw (m) @ 0.25 m/s	2.5	2.8	3.2	3.5	3.8	4.2	4.8
	NC	20	26	30	35	38	42	45
Nominal Duct Size 250mm Diameter	Flow Rate (l/s)	100	125	150	175	200	225	250
	Neck Velocity (m/s)	2.29	2.86	3.43	4.00	4.57	5.15	5.72
	Velocity Pressure (Pa)	4	5	8	10	11	14	16
	Total Pressure (Pa)	20	28	40	50	60	68	75
	Throw (m) @ 0.75 m/s	1.8	2.4	2.8	3.0	3.2	3.4	3.5
	Throw (m) @ 0.50 m/s	2.5	2.8	3.3	3.4	3.8	4.2	4.3
	Throw (m) @ 0.25 m/s	3.3	3.4	3.8	3.9	4.5	4.8	4.9
	NC	22	25	29	32	34	37	40
Nominal Duct Size 300mm Diameter	Flow Rate (l/s)	150	175	200	225	250	300	325
	Neck Velocity (m/s)	2.34	2.73	3.11	3.50	3.89	4.67	5.06
	Velocity Pressure (Pa)	3	6	7	10	12	15	18
	Total Pressure (Pa)	18	22	30	35	50	60	70
	Throw (m) @ 0.75 m/s	2.8	3.1	3.1	4.0	4.2	4.3	4.5
	Throw (m) @ 0.50 m/s	3.8	3.9	4.0	4.2	5.0	5.2	5.5
	Throw (m) @ 0.25 m/s	4.5	4.7	4.7	4.9	6.0	6.1	6.2
	NC	25	27	30	32	34	35	37
Nominal Duct Size 350mm Diameter	Flow Rate (l/s)	200	225	250	275	300	325	350
	Neck Velocity (m/s)	2.26	2.54	2.82	3.10	3.39	3.67	3.95
	Velocity Pressure (Pa)	2	3	4	6	7	8	10
	Total Pressure (Pa)	17	22	25	28	32	39	45
	Throw (m) @ 0.75 m/s	2.2	2.5	2.6	2.8	3.0	3.2	3.3
	Throw (m) @ 0.50 m/s	2.8	3.2	3.4	3.6	3.8	3.9	4.0
	Throw (m) @ 0.25 m/s	3.7	4.0	4.2	4.3	4.5	4.7	4.9
	NC	22	24	25	27	30	32	34
Nominal Duct Size 400mm Diameter	Flow Rate (l/s)	275	300	325	350	375	400	425
	Neck Velocity (m/s)	2.35	2.56	2.78	2.99	3.21	3.42	3.63
	Velocity Pressure (Pa)	3	5	6	6.5	7	8	9
	Total Pressure (Pa)	16	20	24	26	28	30	32
	Throw (m) @ 0.75 m/s	2.3	2.6	2.8	2.9	3.2	3.4	3.5
	Throw (m) @ 0.50 m/s	3.4	3.5	3.7	3.9	4.0	4.2	4.3
	Throw (m) @ 0.25 m/s	4.2	4.5	4.8	5.1	5.3	5.4	5.5
	NC	22	24	26	27	28	29	30

Notes on Performance Data

- All pressures are in Pascals.
- Minimum radii of diffusion are to a terminal velocity (Vt) of 0.75 m/s and maximum to 0.25 m/s. If diffuser is mounted on an exposed round duct, multiply radii of diffusions shown by 0.70.
- The NC values are based on a room absorption of 8dB re 10⁻¹² Watts.
- For effect of dampering see page 12A, table 9.
- Performance data shown is for the diffuser with cones in the 'down' position for horizontal throw. Performance for the cones in the 'up' position for vertical downwards throw, can be approximated by the use of the following factors:

Total Pressure	X 1.6
Radius of Diffusion	X 0.9
NC	+ 5

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.