

## Model: CFP

The Holyoake CFP range of square and round faced Fixed Pattern Radial Induction Swirl Diffusers, have been designed to provide high quality indoor air diffusion.

The CFP is constructed with swirl deflection blades that produce a highly turbulent radial airflow pattern. This draws room air up into the supply air path resulting in mixing at high level and rapid temperature equalization, whilst creating optimum room space conditions, with even temperature gradients.

The CFP 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.

### CFP Square Model Installation

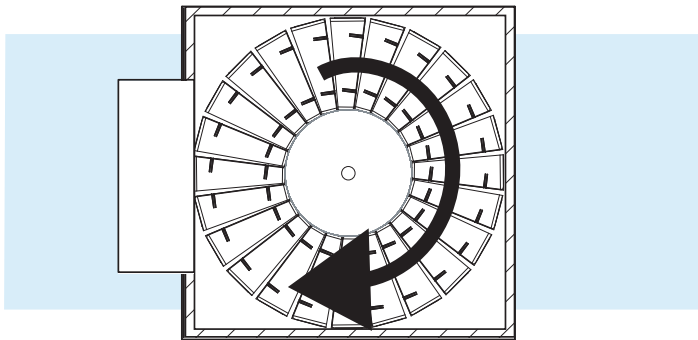
Installation is simple due to the availability of the square lay-in type design. The diffuser can be placed into the T-rail system quickly and easily and the supply duct attached. Alternatively, the diffuser may be conventionally flush mounted, or with the use of a surface mounted installation flange.

### CFPR Circular Model Installation

Installation is also made simple with this model, with the availability of a top entry round cushion head plenum. The diffuser outer edge can be placed flush mounted against the ceiling surface.

### Specifically Designed Swirl Inducing Side Entry Box for CFP Diffusers

A suitably sized specifically designed Holyoake Evenflow Plenum, should be incorporated to provide the best performance.

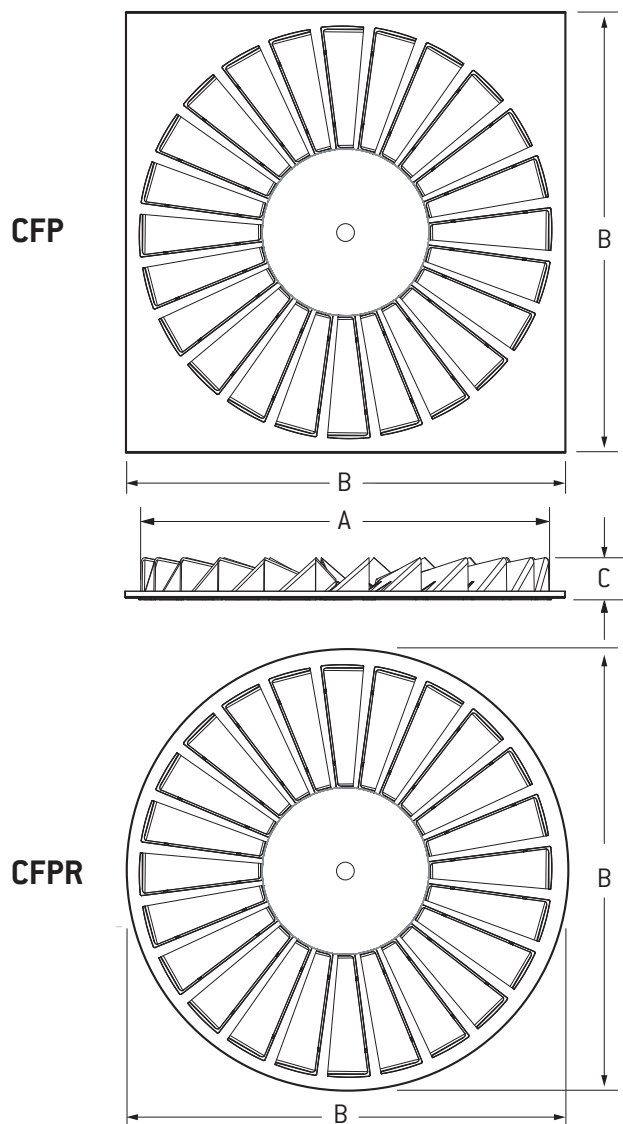


### Features

- Strong Ceiling Effect
- Radial Diffusion Pattern
- High Induction Swirl
- Easy Lay-in Installation
- Attractive Appearance
- Range of Square and Round Faced options

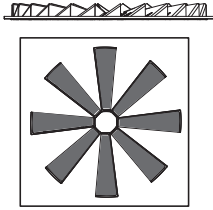
### Construction

The CFP is constructed from a pressed steel body and has a high quality powder coat finish. Air pattern elements are constructed from a tough UV stabilized and fire rated engineering polymer, in either white, or black. The CFP diffuser is both robust and lightweight making on-site installation easy.

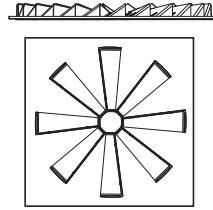


|   | Sizes Available (Nom: Face) |           |           |           |           |           |           |            |
|---|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
|   | CFP450-8                    | CFP450-12 | CFP500-12 | CFP600-12 | CFP600-20 | CFP600-24 | CFPR500-8 | CFPR615-20 |
| A | 395                         | 430       | 430       | 430       | 430       | 545       | 400       | 510        |
| B | 445                         | 445       | 495       | 595       | 595       | 595       | 500       | 615        |
| C | 45                          | 45        | 45        | 45        | 45        | 45        | 45        | 45         |

**Note** Refer to page 132D for box and diffuser weights.



CFP-450 BLK 8

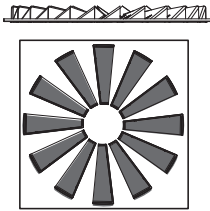


CFP-450 WHT 8

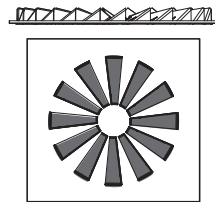
Model: **CFP Radial** Induction Swirl Diffuser (Square)

**450/8 Nominal Face\***

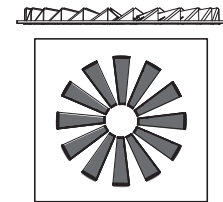
| Duct Size: | Flow Rate [l/s]      | 25          | 50          | 75          | 100         | 125         | 150         | 175         | 200         |
|------------|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 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 | 0.7-0.9-1.5 | 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          | 46          |
| 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 | 0.9-1.2-1.7 | 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          |



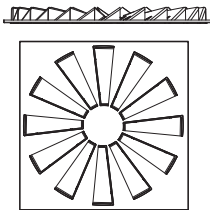
CFP-450 BLK 12



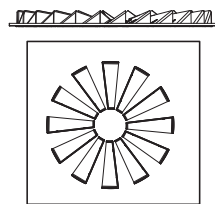
CFP-500 BLK 12



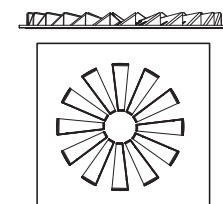
CFP-600 BLK 12



CFP-450 WHT 12



CFP-500 WHT 12



CFP-600 WHT 12

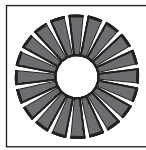
Model: **CFP Radial** Induction Swirl Diffuser (Square)

**450/500/600/12 Nominal Face\***

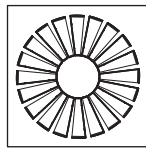
| Duct Size | Flow Rate [l/s]      | 25          | 50          | 75          | 100         | 125         | 150         |  |
|-----------|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|--|
| 150       | Static Pressure (Pa) | 2           | 5           | 11          | 19          | 29          | 43          |  |
|           | Throw (m)            | 0.2-0.5-0.9 | 0.3-0.9-1.2 | 0.9-1.5-2.2 | 1.0-1.9-2.6 | 1.5-2.3-3.4 | 1.6-2.5-4.1 |  |
|           | NC                   | *<10        | 11          | 18          | 24          | 31          | 37          |  |
| 200       | Static Pressure (Pa) | 1           | 3           | 7           | 10          | 16          | 27          |  |
|           | Throw (m)            | 0.2-0.3-0.8 | 0.3-0.6-1.2 | 0.5-1.0-2.0 | 0.8-1.5-2.3 | 1.2-1.9-3.0 | 1.2-2.0-3.8 |  |
|           | NC                   | *<10        | *<10        | 13          | 17          | 22          | 27          |  |
| 250       | Static Pressure (Pa) | *<1         | 2           | 5           | 8           | 10          | 18          |  |
|           | Throw (m)            | 0.2-0.5-0.6 | 0.3-0.5-1.1 | 0.4-1.0-1.9 | 0.7-1.4-2.2 | 1.1-1.8-2.9 | 1.1-1.8-3.6 |  |
|           | NC                   | *<10        | *<10        | 11          | 13          | 16          | 20          |  |

\* See Notes on Performance Data on Page 131D.

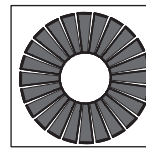
Due to a policy of continuous development and improvement the right is reserved to supply products which may differ slightly from those illustrated and described in this publication.



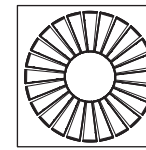
CFP-600 BLK 20



CFP-600 WHT 20



CFP-600 BLK 24



CFP-600 WHT 24

## Model: CFP Radial Induction Swirl Diffuser (Square)

### 600/20 Nominal Face

| 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  | 1.5-2.2-3.3 | 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          | 54          | 61          |             |
| 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                   | <10          | <10         | <10         | 14          | 19          | 26          | 33          | 40          |

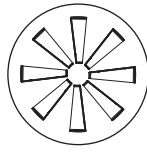
## Model: CFP Radial Induction Swirl Diffuser (Square)

### 600/24 Nominal Face

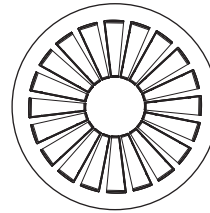
| Duct Size | Flow Rate [l/s]      | 25           | 50          | 100         | 150         | 200         | 250         | 300         | 400         |
|-----------|----------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 150       | Static Pressure [Pa] | *<1          | 2           |             |             |             |             |             |             |
|           | Throw (m)            | 0.3-0.6-1.2  | 1.2-1.6-2.3 |             |             |             |             |             |             |
|           | NC                   | *<10         | *<10        |             |             |             |             |             |             |
| 200       | Static Pressure [Pa] | *<1          | 1           | 4           | 9           | 15          | 22          | 30          | 49          |
|           | Throw (m)            | 0.3-0.5-1.17 | 1.1-1.5-2.2 | 1.9-2.8-3.3 | 2.9-3.2-4.7 | 3.5-4.1-4.9 | 3.7-4.3-5.4 | 4.7-4.9-5.6 | 4.7-5.6-6.8 |
|           | NC                   | *<10         | *<10        | 12          | 24          | 31          | 37          | 42          | 53          |
| 250       | Static Pressure [Pa] | *<1          | 1           | 3           | 5           | 8           | 11          | 15          | 28          |
|           | Throw (m)            | 0.2-0.3-0.6  | 0.6-1.0-1.5 | 1.2-1.8-2.3 | 2.2-3.2-4.5 | 2.7-3.5-4.7 | 2.9-3.8-5.2 | 3.2-4.3-5.6 | 3.8-4.7-6.7 |
|           | NC                   | *<10         | *<10        | 11          | 14          | 24          | 33          | 42          | 52          |
| 300       | Static Pressure [Pa] | *<1          | *<1         | 2           | 4           | 8           | 10          | 15          | 28          |
|           | Throw (m)            | 0.2-0.3-0.5  | 0.5-0.6-0.8 | 1.0-1.4-1.7 | 1.7-2.2-2.8 | 2.2-2.4-3.0 | 2.3-2.7-3.1 | 2.6-3.4-4.2 | 4.3-5.0-5.6 |
|           | NC                   | *<10         | *<10        | 10          | 14          | 24          | 26          | 36          | 52          |
| 350       | Static Pressure [Pa] | *<1          | *<1         | 2           | 3           | 7           | 9           | 13          | 26          |
|           | Throw (m)            |              |             | 0.9-1.2-1.6 | 1.5-2.1-2.7 | 2.1-2.3-3.0 | 2.2-2.6-3.0 | 2.5-3.2-4.1 | 4.2-4.9-5.5 |
|           | NC                   | *<10         | *<10        | *<10        | 12          | 22          | 25          | 34          | 50          |

### \*Notes

- Performance data is based on a specifically designed side entry box.
- Listed throw distances are to a terminal velocity (Vt) of 0.75 - 0.5 - 0.25m/s.
- The NC values are based on a room absorption of 10dB re 10<sup>-12</sup> Watts.
- Static pressure less than 1Pa not shown.
- NC values of less than 10 NC not shown.



CFP R-500 WHT 8



CFP R-615 WHT 20

## Model: **CFPR Radial** Induction Swirl Diffuser (Circular)

### 500/8 Nominal Face

| Duct Size: | Flow Rate (l/s)      | 25          | 50          | 75          | 100         | 125         | 150         | 175         | 200         |
|------------|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 150        | Static Pressure (Pa) | 5           | 12          | 22          | 32          | 53          | 72          |             |             |
|            | Throw (m)            | 0.3-0.6-0.9 | 0.8-1.1-1.4 | 0.9-1.2-1.6 | 1.0-1.4-1.9 | 1.1-1.5-2.1 | 1.2-1.6-2.3 |             |             |
|            | NC                   | 16          | 24          | 36          | 44          | 45          | 51          |             |             |
| 200        | Static Pressure (Pa) | 3           | 6           | 13          | 22          | 38          | 53          | 69          | 87          |
|            | Throw (m)            | 0.2-0.4-0.7 | 0.3-0.5-0.8 | 0.9-1.5-2.3 | 1.4-2.0-3.0 | 1.7-2.3-3.3 | 2.0-2.6-3.5 | 2.1-2.7-3.6 | 2.2-2.7-3.8 |
|            | NC                   | <10         | 14          | 26          | 35          | 40          | 45          | 50          | 54          |
| 250        | Static Pressure (Pa) | 3           | 5           | 10          | 17          | 25          | 38          | 50          | 67          |
|            | Throw (m)            | 0.1-0.2-0.3 | 0.3-0.4-0.5 | 0.8-1.4-2.2 | 1.3-1.9-3.0 | 1.6-2.2-3.2 | 1.7-2.5-3.4 | 1.8-2.6-3.5 | 2.1-2.7-3.6 |
|            | NC                   | <10         | 11          | 22          | 30          | 36          | 40          | 44          | 47          |

## Model: **CFPR Radial** Induction Swirl Diffuser (Circular)

### 615/20 Nominal Face

| Duct Size: | Flow Rate (l/s)      | 50          | 75          | 100         | 125         | 150         | 175         | 200         | 250         | 300         | 350         | 400         |
|------------|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 250        | Static Pressure (Pa) | 4           | 6           | 11          | 16          | 24          | 31          | 40          | 52          | 67          |             |             |
|            | Throw (m)            | 0.4-1.0-1.5 | 0.8-1.4-2.0 | 1.2-1.6-2.5 | 1.4-2.4-3.4 | 1.7-2.6-3.6 | 2.0-3.1-3.9 | 2.2-3.1-3.9 | 2.4-3.4-4.9 | 3.0-4.3-5.6 |             |             |
|            | NC                   | <10         | <10         | 16          | 25          | 30          | 35          | 38          | 45          | 50          |             |             |
| 300        | Static Pressure (Pa) | 1           | 3           | 5           | 7           | 9           | 13          | 17          | 26          | 36          | 48          |             |
|            | Throw (m)            | 0.3-0.4-1.0 | 0.6-0.9-1.7 | 0.9-1.4-2.5 | 1.2-1.6-2.7 | 1.3-1.7-2.8 | 1.4-1.8-3.1 | 1.5-1.9-3.2 | 1.7-2.6-3.6 | 2.2-2.8-4.3 | 2.9-3.7-4.9 |             |
|            | NC                   | <10         | <10         | <10         | 14          | 23          | 30          | 32          | 39          | 46          | 50          |             |
| 350        | Static Pressure (Pa) | 1           | 2           | 3           | 4           | 5           | 7           | 11          | 15          | 19          | 23          | 30          |
|            | Throw (m)            | 0.2-0.4-1.0 | 0.3-0.5-1.5 | 0.5-1.0-1.7 | 1.0-1.4-2.3 | 1.1-1.5-2.6 | 1.2-1.6-2.7 | 1.3-1.8-2.8 | 1.4-2.0-3.2 | 2.2-2.6-4.1 | 2.4-3.5-4.8 | 2.9-3.9-5.6 |
|            | NC                   | <10         | <10         | <10         | 10          | 18          | 26          | 29          | 37          | 44          | 48          | 52          |

#### Product Weights in Kg

|          | CFP 450-8 | CFP450-12 | CFP500-12 | CFP600-12 | CFP600-20 | CFP600-24 | CFPR500-8 | CFPR615-20 |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Diffuser | 1.53      | 1.23      | 1.85      | 2.23      | 2.11      | 2.13      | 1.22      | 1.76       |
| Galv Box | 6.5       | 6.5       | 6.5       | 6.5       | 6.5       | 6.5       | 2.94      | 3.14       |
| Prem Box | 2.5       | 2.5       | 2.6       | 2.6       | 2.6       | 2.6       | N/A       | N/A        |

### Notes

1. CFPR Performance Data is based on a specifically designed top entry galvanized plenum box.
2. Listed throw distances are to a terminal velocity (Vt) of 0.75 – 0.50 – 0.25 m/s.
3. The NC values are based on room absorption of 10dB re: 10<sup>-12</sup> Watts.
4. NC values of less than 10 NC not shown.