

## Model: SFRA

The Holyoake SFRA range of Circular Radial Swirl Diffusers has been designed to provide exceptional indoor air diffusion.

The Series SFRA comprises of fixed pattern radial blades producing a high induction swirl airflow pattern.

The SFRA range of fixed blade swirl diffusers, presents a stylish and effective alternative to other conventional circular, or square ceiling diffusers.

The SFRA diffusers are designed to produce rapid temperature equalisation, via a horizontal radial air pattern, achieved with a turbulent high induction swirl and are ideally suited for applications with increased temperature differentials.

The SFRA diffusers are ideally suited to VAV applications, where ceiling effect is maintained from minimal through to high airflow rates.

### Installation

SFRA Installation is easy with the diffusers being supported by externally mounted fixing tabs, riveted to the circular casing periphery, to provide a suitable fixture to attach to support anchors, provided above the ceiling, (supply and fit by others).

**Note: Diffusers require mechanical fixings to be supported entirely from the ductwork.**

For use with circular ducting, or can be connected to a Premi-aire™ light weight plenum box spigot, (refer to your local Holyoake branch).

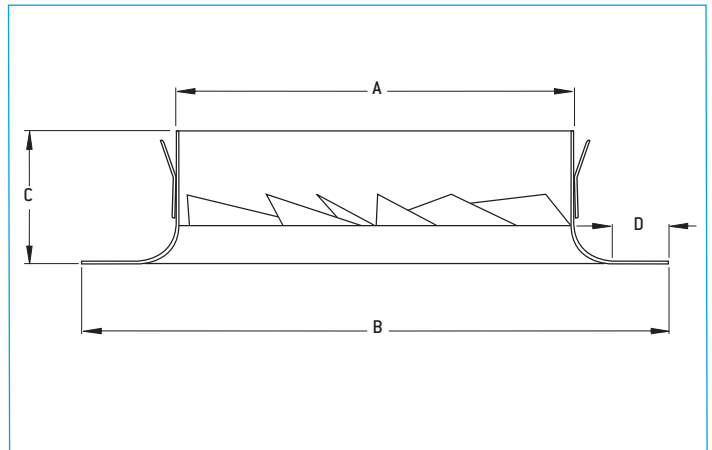
### Construction

Series SFRA are manufactured from spun aluminium, with pressed and folded blades. They are available in a range of five sizes and are supplied with ceiling support tabs fitted as standard. Series SFRA are finished in white powder coat and fitted with accessories and dampers where indicated.

### Features

- Strong Ceiling Effect.
- Radial Diffusion Pattern
- High Induction Swirl.
- Light Weight Spun Aluminium Construction.
- Easy Installation.
- Attractive Appearance.

## Ceiling Radial Swirl Diffuser



| Nominal Duct Size | SFRA |     |     |    |
|-------------------|------|-----|-----|----|
|                   | A    | B   | C   | D  |
| 200               | 195  | 299 | 65  | 33 |
| 250               | 245  | 362 | 70  | 35 |
| 300               | 295  | 425 | 90  | 37 |
| 350               | 345  | 488 | 110 | 38 |
| 400               | 395  | 550 | 130 | 40 |

| Nominal Duct Size | Approximate Weight Kg |
|-------------------|-----------------------|
| 200               | 0.28                  |
| 250               | 0.43                  |
| 300               | 0.67                  |
| 350               | 0.95                  |
| 400               | 1.11                  |

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.

# SFRA – Performance Data

Model: SFRA

|  |                 |     |     |     |     |     |     |     |     |
|--|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Nominal Duct Size<br>200mm<br>Diameter | Flow Rate (l/s) | 25  | 50  | 75  |     |     |     |     |     |
|  | 0.75m/s         | -   | 0.1 | 0.2 |     |     |     |     |     |
|  | Throw (m)       | 0.1 | 0.3 | 0.5 |     |     |     |     |     |
|  | 0.50m/s         | 0.2 | 0.6 | 1.0 |     |     |     |     |     |
|  | 0.25m/s         | 7   | 18  | 25  |     |     |     |     |     |
| Static Pressure (Pa)                   |                 |     |     |     |     |     |     |     |     |
| NC                                     |                 | 17  | 32  | 40  |     |     |     |     |     |
| Nominal Duct Size<br>250mm<br>Diameter | Flow Rate (l/s) | 50  | 75  | 100 | 125 | 150 | 175 |     |     |
|  | 0.75m/s         | 0.2 | 0.3 | 0.5 | 0.6 | 1.0 | 1.2 |     |     |
|  | Throw (m)       | 0.4 | 0.5 | 0.9 | 1.1 | 1.6 | 1.8 |     |     |
|  | 0.50m/s         | 0.8 | 1.1 | 1.6 | 1.9 | 2.5 | 3.0 |     |     |
|  | 0.25m/s         | 3   | 5   | 9   | 13  | 20  | 27  |     |     |
| Static Pressure (Pa)                   |                 |     |     |     |     |     |     |     |     |
| NC                                     |                 | 18  | 22  | 26  | 32  | 38  | 48  |     |     |
| Nominal Duct Size<br>300mm<br>Diameter | Flow Rate (l/s) | 50  | 75  | 100 | 125 | 150 | 175 | 200 |     |
|  | 0.75m/s         | 0.2 | 0.4 | 0.6 | 0.8 | 1.1 | 1.3 | 1.4 |     |
|  | Throw (m)       | 0.5 | 0.7 | 1.0 | 1.4 | 1.6 | 1.9 | 2.1 |     |
|  | 0.50m/s         | 1.0 | 1.2 | 1.6 | 2.1 | 2.5 | 2.9 | 3.4 |     |
|  | 0.25m/s         | 2   | 4   | 8   | 11  | 17  | 23  | 30  |     |
| Static Pressure (Pa)                   |                 |     |     |     |     |     |     |     |     |
| NC                                     |                 | 16  | 20  | 24  | 30  | 36  | 42  | 44  |     |
| Nominal Duct Size<br>350mm<br>Diameter | Flow Rate (l/s) | 75  | 100 | 125 | 150 | 175 | 200 | 225 | 250 |
|  | 0.75m/s         | 0.2 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 | 1.8 |
|  | Throw (m)       | 0.6 | 1.2 | 1.5 | 1.8 | 2.0 | 2.3 | 2.8 | 3.2 |
|  | 0.50m/s         | 1.1 | 1.4 | 1.7 | 2.0 | 2.4 | 2.9 | 3.4 | 4.0 |
|  | 0.25m/s         | 3   | 5   | 9   | 12  | 16  | 20  | 25  | 32  |
| Static Pressure (Pa)                   |                 |     |     |     |     |     |     |     |     |
| NC                                     |                 | 13  | 18  | 23  | 28  | 34  | 39  | 45  | 51  |
| Nominal Duct Size<br>400mm<br>Diameter | Flow Rate (l/s) | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 |
|  | 0.75m/s         | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 | 1.8 | 2.3 | 2.7 |
|  | Throw (m)       | 0.8 | 1.2 | 1.4 | 1.6 | 1.8 | 2.4 | 2.8 | 3.1 |
|  | 0.50m/s         | 1.2 | 1.5 | 2.0 | 2.4 | 2.6 | 3.0 | 3.4 | 3.6 |
|  | 0.25m/s         | 5   | 7   | 10  | 13  | 17  | 20  | 24  | 29  |
| Static Pressure (Pa)                   |                 |     |     |     |     |     |     |     |     |
| NC                                     |                 | 18  | 21  | 24  | 27  | 30  | 33  | 37  | 42  |

## Product Ordering Key and Suggested Specification

SFRA – 200 – FINISH

Model

Nominal  
Duct Size

Holyoake White  
Mill Aluminium  
Powder Coat

Holyoake Series SFRA Circular Fixed Round Aluminium Radial Swirl Diffusers shall be high induction horizontal swirl diffuser, with fixed pattern radial blades, to achieve a high induction swirl airflow pattern.

Series SFRA Diffusers shall be suitable for variable air volume (VAV) applications.

Circular Radial Swirl Diffusers shall be finished in white power coat.

Diffusers shall be fitted with accessories and dampers where indicated.

All shall be as manufactured by Holyoake.

### Notes

- Horizontal radial throws (m) are to a terminal velocity (Vt) of 0.75 - 0.50 - 0.25 m/s.
- Pressure drop figures are based on duct mounted units.
- For Premi-Aire™ side entry supply boxes, Multiply Throws by a factor of 0.95 and Pressure Drop by a factor of 1.02.
- NC values are based on standard room attenuation of 10dB re 10<sup>-12</sup> Watts.
- NC values below NC 10 not shown.
- Seismic restraints would be required, but not supplied.