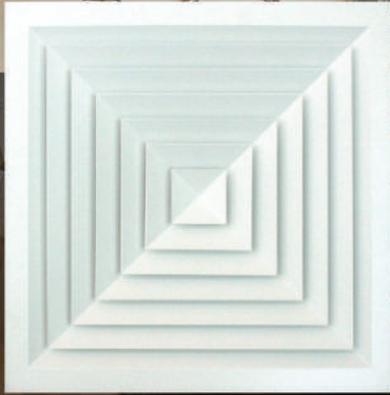
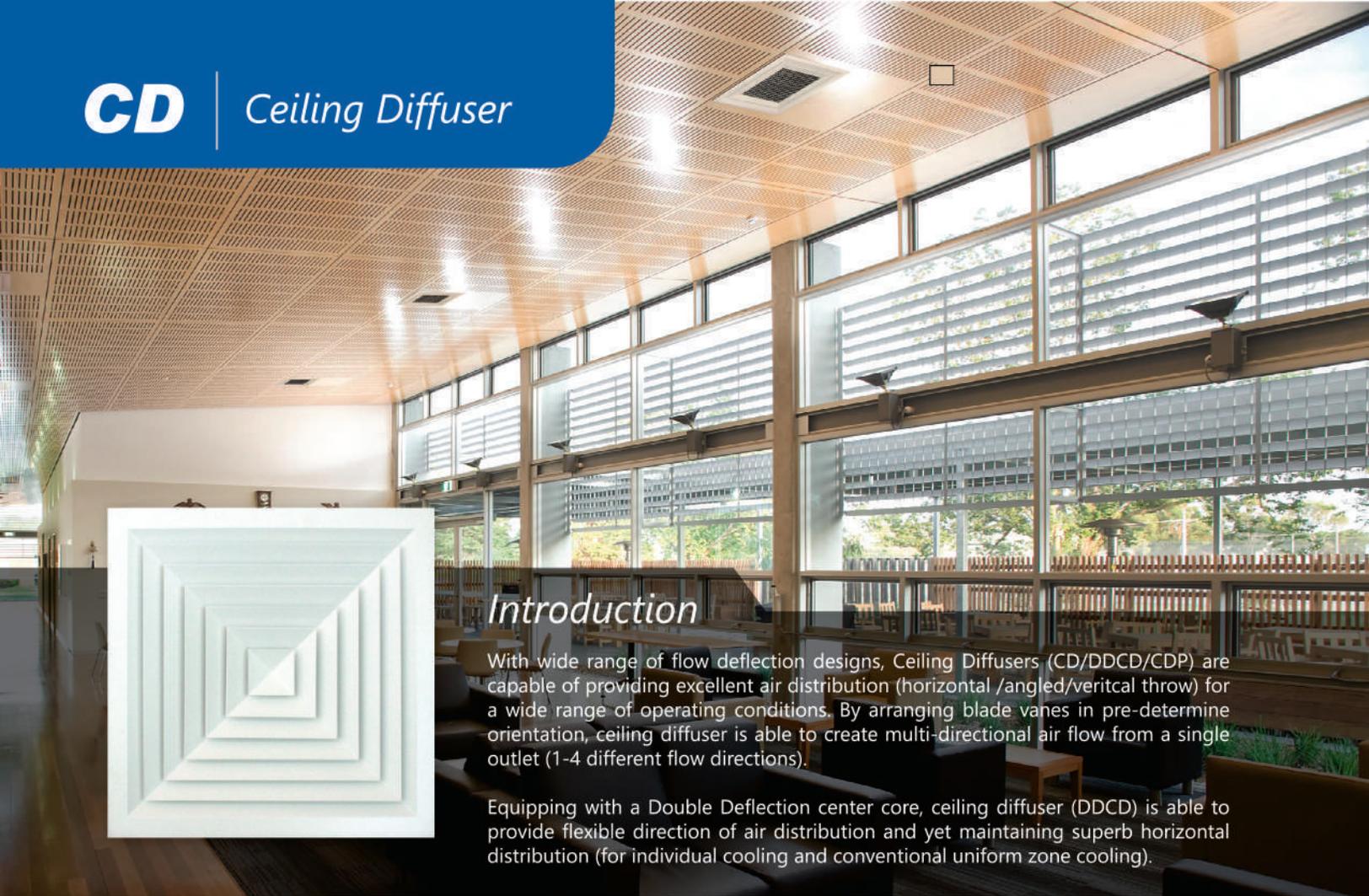




**CD** *Ceiling Diffuser*





### Introduction

With wide range of flow deflection designs, Ceiling Diffusers (CD/DDCD/CDP) are capable of providing excellent air distribution (horizontal /angled/vertical throw) for a wide range of operating conditions. By arranging blade vanes in pre-determine orientation, ceiling diffuser is able to create multi-directional air flow from a single outlet (1-4 different flow directions).

Equipping with a Double Deflection center core, ceiling diffuser (DDCD) is able to provide flexible direction of air distribution and yet maintaining superb horizontal distribution (for individual cooling and conventional uniform zone cooling).

### CONSTRUCTIONS & MATERIALS

- 1-4 way flow directions
- Adjustable throw directions (Plate deflector)
- Customizable throw (Horizontal/Angled, Upon request)
- Removable center cores (Upon request)
- Highly customizable designs

#### Frames



Extruded Aluminium



Galvanized Steel Stainless Steel\*



Stainless Steel



Extruded Aluminium



Galvanized Steel Stainless Steel\*

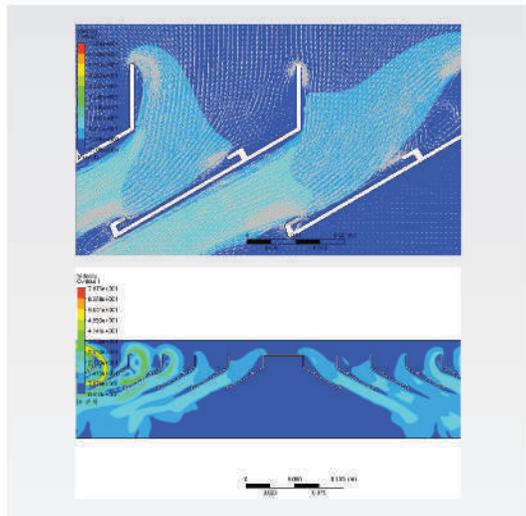
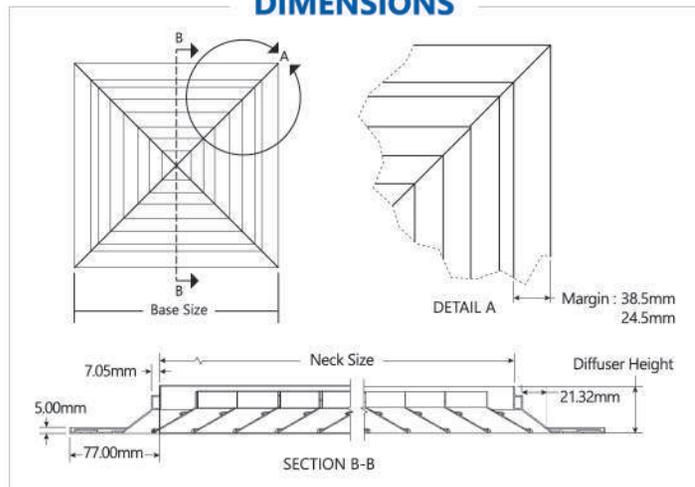


Stainless Steel

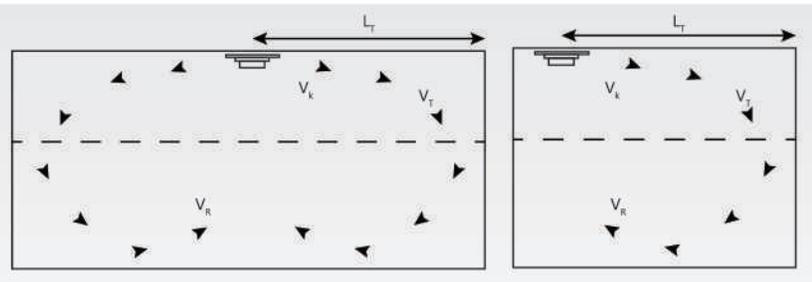
\* Upon request

#### Vaness

### DIMENSIONS

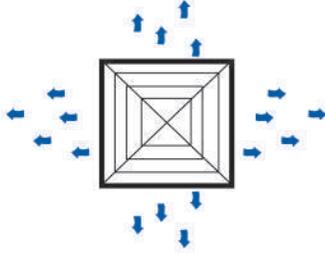


### FOR SINGLE CORE PLATE DEFLECTOR



# TECHNICAL PERFORMANCE DATA

## Supply - 4 Way Square Diffuser



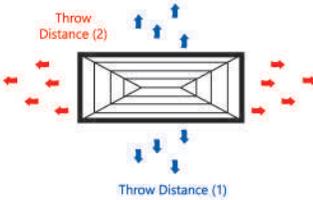
\* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

\* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.



| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s   | NR25  |  | NR35  |  | NR40  |   | NR45  |   |                                     |  |
|----------------------|--------------------------------------|---|---|--|---|--|---|---|---|---|-------------------------------------|--|
|                      |                                      |   | 100   | 150  | 200   | 250                                    | 500   | 800   | 1000  | 2000  | 3000                                |  |
| 150 x 150            | 0.0225 (0.009)                       | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | 28<br>1.2<br>3.0<br>5.0<br>20<br>0.12<br>13 | 42<br>1.8<br>4.6<br>13<br>30<br>0.05<br>23 | 56<br>3.0<br>7.7<br>32<br>42<br>0.022<br>>30  | -<br>-<br>-<br>-<br>-<br>-<br>-        | -<br>-<br>-<br>-<br>-<br>-<br>-               | -<br>-<br>-<br>-<br>-<br>-<br>-               | -<br>-<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-<br>-     |  |
| 150 x 150            | 0.0506 (0.02)                        | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-<br>-             | 1.2<br>2.1<br>2.5<br>20<br>0.23<br>8.0     | 1.6<br>2.8<br>4.7<br>22<br>0.13<br>11         | 2.1<br>3.5<br>7.0<br>26<br>0.08<br>16  | 4.0<br>6.9<br>26<br>42<br>0.025<br>>30        | -<br>-<br>-<br>-<br>-<br>-<br>-               | -<br>-<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-<br>-     |  |
| 300 x 300            | 0.09 (0.036)                         | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-<br>-            | 1.2<br>1.5<br>1.9<br>2.2<br>20<br>0.23<br>5.0 | 1.5<br>1.9<br>2.2<br>20<br>0.23<br>7.5 | 3.0<br>3.9<br>6.2<br>22<br>32<br>0.035<br>18  | 4.8<br>5.8<br>7.7<br>32<br>47<br>0.045<br>>30 | 5.8<br>7.7<br>32<br>47<br>0.045<br>>30      | -<br>-<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-<br>-     |  |
| 375 x 375            | 0.141 (0.056)                        | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-<br>-            | -<br>-<br>-<br>-<br>-<br>-<br>-               | 1.3<br>1.2<br>2.5<br>20<br>0.24<br>4.0 | 2.4<br>2.5<br>3.5<br>9.0<br>34<br>0.065<br>11 | 3.9<br>4.0<br>5.0<br>14<br>38<br>0.045<br>20  | 4.8<br>5.0<br>14<br>55<br>38<br>0.045<br>25 | 9.0<br>9.9<br>55<br>32<br>47<br>0.045<br>25 | -<br>-<br>-<br>-<br>-<br>-<br>-     |  |
| 450 x 450            | 0.2025 (0.081)                       | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-<br>-            | -<br>-<br>-<br>-<br>-<br>-<br>-               | -<br>-<br>-<br>-<br>-<br>-<br>-        | 2.1<br>1.7<br>2.7<br>4.2<br>27<br>0.11<br>6.5 | 3.5<br>2.7<br>3.4<br>7.0<br>32<br>0.09<br>13  | 4.0<br>6.9<br>27<br>47<br>0.09<br>16        | 8.0<br>6.9<br>27<br>47<br>0.09<br>16        | -<br>-<br>-<br>-<br>-<br>-<br>-     |  |
| 525 x 525            | 0.276 (0.110)                        | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-<br>-            | -<br>-<br>-<br>-<br>-<br>-<br>-               | -<br>-<br>-<br>-<br>-<br>-<br>-        | 1.8<br>1.3<br>2.0<br>2.2<br>22<br>0.23<br>2.7 | 2.7<br>2.0<br>2.5<br>3.5<br>26<br>0.15<br>7.5 | 3.5<br>5.1<br>15<br>43<br>0.15<br>11        | 7.0<br>7.6<br>32<br>47<br>0.15<br>11        | 10<br>7.6<br>32<br>47<br>0.15<br>11 |  |

## Supply - 4 Way Rectangular Diffuser



\* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

\* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.

\* Neck size given are in Height x Length.



| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s   | NR25  | NR40   |   | NR45  |   |  |  |   |   |
|----------------------|--------------------------------------|---|---|--|---|---|---|--|--|---|---|
|                      |                                      |   | 100   | NR35   | NR35  | NR45  | 600   | 800  | 1000   | 2000                                    | 2500                                    |
| 150 x 225            | 0.03375 (0.014)                      | Throw Distance (1) (0.37 m/s), m<br>Throw Distance (2) (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient (1,2)<br>Induction Ratio (1,2) | 56<br>2.2<br>1.6<br>4.0<br>9.0<br>27<br>0.05/0.1<br>21/14   | 70<br>2.7<br>2.0<br>5.0<br>14<br>33<br>0.04/0.06<br>27/19  | 400<br>4.5<br>3.2<br>8.0<br>37<br>44<br>0.02/0.03<br>>30  | 500<br>5.5<br>4.0<br>10<br>55<br>50<br>0.01/0.04<br>>30   | 600<br>-<br>-<br>-<br>-<br>-<br>-<br>-              | 800<br>-<br>-<br>-<br>-<br>-<br>-<br>-         | 1000<br>-<br>-<br>-<br>-<br>-<br>-<br>-        | 2000<br>-<br>-<br>-<br>-<br>-<br>-<br>- | 2500<br>-<br>-<br>-<br>-<br>-<br>-<br>- |
| 150 x 300            | 0.045 (0.018)                        | Throw Distance (1) (0.37 m/s), m<br>Throw Distance (2) (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient (1,2)<br>Induction Ratio (1,2) | 56<br>2.0<br>1.2<br>3.0<br>5.0<br>22<br>0.09/0.22<br>16/8.0 | 70<br>2.6<br>1.6<br>3.9<br>9.0<br>27<br>0.05/0.13<br>22/11 | 400<br>4.2<br>2.5<br>6.2<br>37<br>44<br>0.02/0.04<br>-2/0 | 500<br>5.0<br>3.0<br>7.7<br>50<br>44<br>0.01/0.04<br>-2/7 | 600<br>6.0<br>3.8<br>9.3<br>50<br>50<br>-<br>-      | 800<br>-<br>-<br>-<br>-<br>-<br>-<br>-         | 1000<br>-<br>-<br>-<br>-<br>-<br>-<br>-        | 2000<br>-<br>-<br>-<br>-<br>-<br>-<br>- | 2500<br>-<br>-<br>-<br>-<br>-<br>-<br>- |
| 225 x 300            | 0.0675 (0.027)                       | Throw Distance (1) (0.37 m/s), m<br>Throw Distance (2) (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient (1,2)<br>Induction Ratio (1,2) | 1.5<br>1.3<br>2.0<br>2.2<br>20<br>0.19/0.25<br>8.5/8.0      | 2.0<br>1.6<br>2.6<br>4.0<br>20<br>0.11/0.18<br>13/9.0      | 3.0<br>2.5<br>4.1<br>9.0<br>31<br>0.05/0.08<br>22/17      | 3.9<br>3.0<br>5.1<br>15<br>36<br>0.03/0.06<br>30/22       | 4.5<br>3.5<br>6.2<br>22<br>40<br>0.03/0.04<br>-2/7  | 6.0<br>4.7<br>8.2<br>40<br>47<br>-<br>-        | -<br>-<br>-<br>-<br>-<br>-<br>-                | -<br>-<br>-<br>-<br>-<br>-<br>-         | -<br>-<br>-<br>-<br>-<br>-<br>-         |
| 225 x 375            | 0.0844 (0.034)                       | Throw Distance (1) (0.37 m/s), m<br>Throw Distance (2) (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient (1,2)<br>Induction Ratio (1,2) | -<br>-<br>-<br>-<br>-<br>-<br>-                             | 1.7<br>1.3<br>2.0<br>2.2<br>26<br>0.18/-<br>9.0/6.0        | 3.0<br>2.5<br>4.1<br>9.0<br>36<br>0.07/0.14<br>18/11      | 3.5<br>2.5<br>4.1<br>14<br>36<br>0.06/0.1<br>22/14        | 4.5<br>2.7<br>4.9<br>22<br>36<br>0.04/0.09<br>30/16 | 5.5<br>3.5<br>8.2<br>40<br>47<br>-0.06<br>-2/3 | 7.0<br>4.7<br>8.2<br>47<br>0.03<br>-0.03       | -<br>-<br>-<br>-<br>-<br>-<br>-         | -<br>-<br>-<br>-<br>-<br>-<br>-         |
| 225 x 450            | 0.1013 (0.041)                       | Throw Distance (1) (0.37 m/s), m<br>Throw Distance (2) (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient (1,2)<br>Induction Ratio (1,2) | -<br>-<br>-<br>-<br>-<br>-<br>-                             | -<br>-<br>-<br>-<br>-<br>-<br>-                            | 2.7<br>1.7<br>2.7<br>4.5<br>23<br>0.09/0.2<br>16/8        | 3.5<br>2.2<br>3.4<br>7.0<br>26<br>0.06/0.14<br>23/11      | 5.2<br>3.2<br>5.4<br>17<br>38<br>-0.07<br>-2/0      | 5.2<br>3.2<br>5.4<br>17<br>38<br>-0.07<br>-2/0 | 6.5<br>3.8<br>6.8<br>25<br>44<br>-0.05<br>-2/3 | -<br>-<br>-<br>-<br>-<br>-<br>-         | -<br>-<br>-<br>-<br>-<br>-<br>-         |

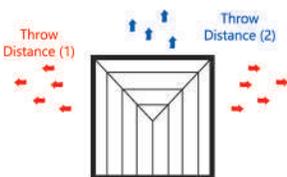
Supply - 4 Way Rectangular Diffuser

| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25      |           |            |            | NR35       | NR40       | NR45        |             |             |
|----------------------|--------------------------------------|---|-----------|-----------|------------|------------|------------|------------|-------------|-------------|-------------|
|                      |                                      |   | 200<br>56 | 250<br>70 | 400<br>112 | 500<br>140 | 600<br>168 | 800<br>224 | 1000<br>280 | 2000<br>560 | 2500<br>840 |
| 300 x 375            | 0.1125<br>(0.045)                    | Throw Distance (1) (0.37 m/s), m                                      | -         | -         | 2.4        | 2.8        | 3.4        | 4.7        | 5.3         | -           | -           |
|                      |                                      | Throw Distance (2) (0.37m/s), m                                       | -         | -         | 2.0        | 2.4        | 2.7        | 3.8        | 4.7         | -           | -           |
|                      |                                      | Face Velocity, m/s  | -         | -         | 2.5        | 3.1        | 3.7        | 4.9        | 6.2         | -           | -           |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | 3.5        | 5.0        | 8.0        | 14         | 22          | -           | -           |
|                      |                                      | Noise Rating (NR)   | -         | -         | 21         | 26         | 30         | 36         | 42          | -           | -           |
|                      |                                      | Temperature Quotient (1,2)  | -         | -         | 0.12/0.18  | 0.11/0.15  | 0.07/0.11  | 0.04/0.06  | -0.04       | -           | -           |
|                      |                                      | Induction Ratio (1,2)   | -         | -         | 13/9.5     | 14/11      | 19/14      | 27/23      | -27         | -           | -           |
|                      |                                      |   |           |           |            |            |            |            |             |             |             |
| 300 x 450            | 0.135<br>(0.054)                     | Throw Distance (1) (0.37 m/s), m                                      | -         | -         | 2.2        | 2.5        | 3.0        | 4.0        | 5.0         | -           | -           |
|                      |                                      | Throw Distance (2) (0.37m/s), m                                       | -         | -         | 1.6        | 2.0        | 2.5        | 3.2        | 4.0         | -           | -           |
|                      |                                      | Face Velocity, m/s  | -         | -         | 2.1        | 2.6        | 3.1        | 4.1        | 5.1         | -           | -           |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | 2.5        | 3.8        | 5.0        | 10         | 15          | -           | -           |
|                      |                                      | Noise Rating (NR)   | -         | -         | <20        | 23         | 25         | 33         | 38          | -           | -           |
|                      |                                      | Temperature Quotient (1,2)  | -         | -         | 0.17/-     | 0.14/0.21  | 0.11/0.15  | 0.07/0.11  | 0.05/0.07   | -           | -           |
|                      |                                      | Induction Ratio (1,2)   | -         | -         | 9/6        | 11/8.5     | 14/11      | 20/15      | 26/20       | -           | -           |
|                      |                                      |   |           |           |            |            |            |            |             |             |             |
| 300 x 525            | 0.1575<br>(0.063)                    | Throw Distance (1) (0.37 m/s), m                                      | -         | -         | -          | 2.6        | 3.2        | 4.3        | 5.0         | 10.5        | -           |
|                      |                                      | Throw Distance (2) (0.37m/s), m                                       | -         | -         | -          | 1.6        | 2.0        | 2.7        | 3.5         | 6.5         | -           |
|                      |                                      | Face Velocity, m/s  | -         | -         | -          | 2.2        | 2.6        | 3.5        | 4.4         | 8.8         | -           |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | -          | 2.5        | 4.0        | 7.0        | 13          | 40          | -           |
|                      |                                      | Noise Rating (NR)   | -         | -         | -          | 20         | 24         | 30         | 35          | >50         | -           |
|                      |                                      | Temperature Quotient (1,2)  | -         | -         | -          | 0.15/-     | 0.11/0.22  | 0.06/0.14  | 0.05/0.09   | -           | -           |
|                      |                                      | Induction Ratio (1,2)   | -         | -         | -          | 11/5.5     | 13/7.2     | 20/11      | 24/15       | -           | -           |
|                      |                                      |   |           |           |            |            |            |            |             |             |             |

| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25      |           |            |            | NR35       | NR40       | NR45        |             |             |
|----------------------|--------------------------------------|---|-----------|-----------|------------|------------|------------|------------|-------------|-------------|-------------|
|                      |                                      |   | 200<br>56 | 250<br>70 | 400<br>112 | 500<br>140 | 600<br>168 | 800<br>224 | 1000<br>280 | 2000<br>560 | 2500<br>840 |
| 375 x 450            | 0.1688<br>(0.068)                    | Throw Distance (1) (0.37 m/s), m                                      | -         | -         | -          | 2.3        | 2.8        | 3.8        | 4.5         | 9.2         | -           |
|                      |                                      | Throw Distance (2) (0.37m/s), m                                       | -         | -         | -          | 1.8        | 2.3        | 3.2        | 3.8         | 7.2         | -           |
|                      |                                      | Face Velocity, m/s  | -         | -         | -          | 2.0        | 2.5        | 3.3        | 4.1         | 8.2         | -           |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | -          | 2.2        | 3.5        | 6.0        | 10          | 37          | -           |
|                      |                                      | Noise Rating (NR)   | -         | -         | -          | 20         | 24         | 30         | 36          | >50         | -           |
|                      |                                      | Temperature Quotient (1,2)  | -         | -         | -          | 0.22/-     | 0.14/0.22  | 0.08/0.11  | 0.06/0.08   | -           | -           |
|                      |                                      | Induction Ratio (1,2)   | -         | -         | -          | 8/6.5      | 11/8       | 15/13      | 20/16       | -           | -           |
|                      |                                      |   |           |           |            |            |            |            |             |             |             |
| 375 x 525            | 0.1969<br>(0.079)                    | Throw Distance (1) (0.37 m/s), m                                      | -         | -         | -          | -          | 2.6        | 3.6        | 4.5         | 9.0         | 11          |
|                      |                                      | Throw Distance (2) (0.37m/s), m                                       | -         | -         | -          | -          | 1.9        | 2.7        | 3.4         | 6.5         | 8.0         |
|                      |                                      | Face Velocity, m/s  | -         | -         | -          | -          | 2.1        | 2.8        | 3.5         | 7.0         | 8.8         |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | -          | -          | 2.3        | 4.5        | 7.0         | 27          | 40          |
|                      |                                      | Noise Rating (NR)   | -         | -         | -          | -          | 20         | 24         | 32          | 47          | >50         |
|                      |                                      | Temperature Quotient (1,2)  | -         | -         | -          | -          | 0.18/-     | 0.11/0.18  | 0.08/0.11   | -           | -           |
|                      |                                      | Induction Ratio (1,2)   | -         | -         | -          | -          | 9/6.5      | 14/9.5     | 18/12.5     | -           | -           |
|                      |                                      |   |           |           |            |            |            |            |             |             |             |

| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25      |           |            |            | NR35       | NR40       | NR45        |             |             |
|----------------------|--------------------------------------|---|-----------|-----------|------------|------------|------------|------------|-------------|-------------|-------------|
|                      |                                      |   | 200<br>56 | 250<br>70 | 400<br>112 | 500<br>140 | 600<br>168 | 800<br>224 | 1000<br>280 | 2000<br>560 | 2500<br>840 |
| 450 x 525            | 0.2363<br>(0.095)                    | Throw Distance (1) (0.37 m/s), m                                      | -         | -         | -          | -          | -          | 2.9        | 4.0         | 7.5         | 9.8         |
|                      |                                      | Throw Distance (2) (0.37m/s), m                                       | -         | -         | -          | -          | -          | 2.7        | 3.5         | 6.5         | 8.0         |
|                      |                                      | Face Velocity, m/s  | -         | -         | -          | -          | -          | 2.3        | 2.9         | 5.8         | 7.3         |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | -          | -          | -          | 3.0        | 5.0         | 17          | 30          |
|                      |                                      | Noise Rating (NR)   | -         | -         | -          | -          | -          | 22         | 29          | 43          | 47          |
|                      |                                      | Temperature Quotient (1,2)  | -         | -         | -          | -          | -          | 0.17/0.22  | 0.11/0.13   | -           | -           |
|                      |                                      | Induction Ratio (1,2)   | -         | -         | -          | -          | -          | 9.5/8.5    | 14.5/12     | -           | -           |
|                      |                                      |   |           |           |            |            |            |            |             |             |             |

Supply - 3 Way Square Diffuser



| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25      |           | NR35       | NR40       | NR45       |            |             |             |             |
|----------------------|--------------------------------------|---|-----------|-----------|------------|------------|------------|------------|-------------|-------------|-------------|
|                      |                                      |   | 200<br>56 | 250<br>70 | 400<br>112 | 500<br>140 | 600<br>168 | 800<br>224 | 1000<br>280 | 2000<br>560 | 2500<br>700 |
| 150 x 150            | 0.0225<br>(0.009)                    | Throw Distance (1) (0.30 m/s), m                                      | 3.4       | 4.2       | -          | -          | -          | -          | -           | -           | -           |
|                      |                                      | Throw Distance (2) (0.30 m/s), m                                      | 2.7       | 3.4       | -          | -          | -          | -          | -           | -           | -           |
|                      |                                      | Face Velocity, m/s  | 6.2       | 7.7       | -          | -          | -          | -          | -           | -           | -           |
|                      |                                      | Total Pressure Loss, Pa   | 23        | 32        | -          | -          | -          | -          | -           | -           | -           |
|                      |                                      | Noise Rating (NR)   | 35        | 41        | -          | -          | -          | -          | -           | -           | -           |
|                      |                                      | Temperature Quotient (1,2)  | 0.03/0.02 | -0.02     | -          | -          | -          | -          | -           | -           | -           |
|                      |                                      | Induction Ratio (1,2)   | -         | -         | -          | -          | -          | -          | -           | -           | -           |
|                      |                                      |   |           |           |            |            |            |            |             |             |             |
| 150 x 300            | 0.045<br>(0.018)                     | Throw Distance (1) (0.30 m/s), m                                      | 2.0       | 2.4       | 4.0        | 4.9        | 5.8        | -          | -           | -           | -           |
|                      |                                      | Throw Distance (2) (0.30 m/s), m                                      | 2.6       | 3.3       | 5.5        | 6.5        | 8.0        | -          | -           | -           | -           |
|                      |                                      | Face Velocity, m/s  | 3.1       | 3.9       | 6.2        | 7.7        | 9.3        | -          | -           | -           | -           |
|                      |                                      | Total Pressure Loss, Pa   | 5.5       | 9.0       | 22         | 32         | 48         | -          | -           | -           | -           |
|                      |                                      | Noise Rating (NR)   | 22        | 27        | 38         | 44         | 46         | -          | -           | -           | -           |
|                      |                                      | Temperature Quotient (1,2)  | 0.08/0.05 | 0.06/0.04 | 0.025/-    | 0.018/-    | -          | -          | -           | -           | -           |
|                      |                                      | Induction Ratio (1,2)   | 16/22     | 22/27     | -          | -          | -          | -          | -           | -           | -           |
|                      |                                      |   |           |           |            |            |            |            |             |             |             |

\* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

\* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.

\* Neck size given are in Height x Length.

TECHNICAL PERFORMANCE DATA



| Grille Neck Size, mm             | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25              |                                  | NR35      |           | NR40      |     | NR45 |      |      |   |
|----------------------------------|--------------------------------------|---|-------------------|----------------------------------|-----------|-----------|-----------|-----|------|------|------|---|
|                                  |                                      |   | 200               | 250                              | 400       | 500       | 600       | 800 | 1000 | 2000 | 2500 |   |
| 225 x 225                        | 0.0506<br>(0.020)                    | Throw Distance (1) (0.30 m/s), m                                      | 2.3               | 2.7                              | 4.5       | 5.6       | 6.5       | -   | -    | -    | -    | - |
|                                  |                                      | Throw Distance (2) (0.30 m/s), m                                      | 1.8               | 3.0                              | 3.7       | 4.8       | 5.8       | -   | -    | -    | -    | - |
|                                  |                                      | Face Velocity, m/s  | 2.8               | 3.5                              | 5.6       | 6.9       | 8.3       | -   | -    | -    | -    | - |
|                                  |                                      | Total Pressure Loss, Pa   | 4.5               | 7.0                              | 18        | 27        | 38        | -   | -    | -    | -    | - |
|                                  |                                      | Noise Rating (NR)   | 21                | 26                               | 37        | 42        | 45        | -   | -    | -    | -    | - |
|                                  |                                      | Temperature Quotient (1,2)  | 0.07/0.09         | 0.05/0.04                        | 0.02/0.03 | -/0.017   | -         | -   | -    | -    | -    | - |
|                                  |                                      | Induction Ratio (1,2)   | 19/14             | 23/27                            | -         | -         | -         | -   | -    | -    | -    | - |
|                                  |                                      | 225 x 300   | 0.0675<br>(0.027) | Throw Distance (1) (0.30 m/s), m | 1.8       | 2.4       | 3.6       | 4.5 | 5.5  | 7.0  | -    | - |
| Throw Distance (2) (0.30 m/s), m | 1.8                                  | 2.4   | 3.6               | 4.5                              | 5.5       | 7.0       | -         | -   | -    | -    |      |   |
| Face Velocity, m/s               | 2.0                                  | 2.6   | 4.1               | 5.1                              | 6.2       | 8.2       | -         | -   | -    | -    |      |   |
| Total Pressure Loss, Pa          | 2.3                                  | 4.0   | 10                | 13                               | 22        | 36        | -         | -   | -    | -    |      |   |
| Noise Rating (NR)                | <20                                  | 20  | 31                | 35                               | 40        | 47        | -         | -   | -    | -    |      |   |
| Temperature Quotient (1,2)       | 0.13                                 | 0.08  | 0.045             | 0.028                            | -         | -         | -         | -   | -    | -    |      |   |
| Induction Ratio (1,2)            | 11.5                                 | 17  | 26                | -                                | -         | -         | -         | -   | -    | -    |      |   |
| 225 x 375                        | 0.0844<br>(0.034)                    | Throw Distance (1) (0.30 m/s), m                                      | -                 | 1.8                              | 2.7       | 3.7       | 4.5       | 5.5 | 7.8  | -    | -    |   |
|                                  |                                      | Throw Distance (2) (0.30 m/s), m                                      | -                 | 2.4                              | 3.5       | 4.5       | 5.0       | 6.5 | 9.0  | -    | -    |   |
|                                  |                                      | Face Velocity, m/s  | -                 | 2.0                              | 3.3       | 4.1       | 4.9       | 6.5 | 8.2  | -    | -    |   |
|                                  |                                      | Total Pressure Loss, Pa   | -                 | 2.3                              | 6.0       | 10        | 14        | 23  | 33   | -    | -    |   |
|                                  |                                      | Noise Rating (NR)   | -                 | <20                              | 26        | 30        | 35        | 42  | 47   | -    | -    |   |
|                                  |                                      | Temperature Quotient (1,2)  | -                 | 0.15/0.09                        | 0.06/0.05 | 0.05/0.04 | 0.04/0.03 | -   | -    | -    | -    |   |
|                                  |                                      | Induction Ratio (1,2)   | -                 | 11/14.5                          | 16/22     | 23/-      | -         | -   | -    | -    | -    |   |

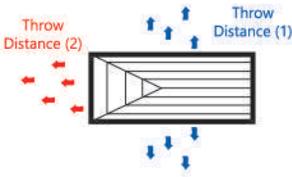
| Grille Neck Size, mm             | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25              |                                  | NR35      |           | NR40      |        | NR45 |      |      |   |
|----------------------------------|--------------------------------------|---|-------------------|----------------------------------|-----------|-----------|-----------|--------|------|------|------|---|
|                                  |                                      |   | 200               | 250                              | 400       | 500       | 600       | 800    | 1000 | 2000 | 2500 |   |
| 300 x 300                        | 0.09<br>(0.036)                      | Throw Distance (1) (0.30 m/s), m                                      | -                 | -                                | 3.6       | 4.4       | 5.0       | 6.6    | 8.0  | -    | -    |   |
|                                  |                                      | Throw Distance (2) (0.30 m/s), m                                      | -                 | -                                | 2.6       | 3.5       | 4.0       | 5.5    | 6.7  | -    | -    |   |
|                                  |                                      | Face Velocity, m/s  | -                 | -                                | 3.1       | 3.9       | 4.6       | 6.2    | 7.7  | -    | -    |   |
|                                  |                                      | Total Pressure Loss, Pa   | -                 | -                                | 5.0       | 8.0       | 13        | 23     | 32   | -    | -    |   |
|                                  |                                      | Noise Rating (NR)   | -                 | -                                | 26        | 31        | 35        | 42     | 47   | -    | -    |   |
|                                  |                                      | Temperature Quotient (1,2)  | -                 | -                                | 0.06/0.07 | 0.04/0.05 | 0.03/0.05 | -      | -    | -    | -    |   |
|                                  |                                      | Induction Ratio (1,2)   | -                 | -                                | 22/14.5   | 28/23     | ~26       | -      | -    | -    | -    |   |
|                                  |                                      | 300 x 375   | 0.1125<br>(0.045) | Throw Distance (1) (0.30 m/s), m | -         | -         | 3.0       | 3.8    | 4.4  | 6.0  | 7.5  | - |
| Throw Distance (2) (0.30 m/s), m | -                                    |   |                   | -                                | 2.3       | 3.5       | 4.1       | 5.5    | 6.5  | -    | -    |   |
| Face Velocity, m/s               | -                                    |   |                   | -                                | 2.5       | 3.1       | 3.7       | 4.9    | 6.2  | -    | -    |   |
| Total Pressure Loss, Pa          | -                                    |   |                   | -                                | 3.5       | 5.2       | 7.5       | 14     | 22   | -    | -    |   |
| Noise Rating (NR)                | -                                    |   |                   | -                                | 22        | 26        | 30        | 37     | 42   | -    | -    |   |
| Temperature Quotient (1,2)       | -                                    |   |                   | -                                | 0.08/0.15 | 0.06/0.07 | 0.05/0.06 | -      | -    | -    | -    |   |
| Induction Ratio (1,2)            | -                                    |   |                   | -                                | 15.5/10   | 22/19     | 27/23     | -      | -    | -    | -    |   |
| 300 x 450                        | 0.135<br>(0.054)                     |   |                   | Throw Distance (1) (0.30 m/s), m | -         | -         | 2.5       | 3.2    | 3.7  | 5.0  | 6.2  | - |
|                                  |                                      | Throw Distance (2) (0.30 m/s), m                                      | -                 | -                                | 2.7       | 3.5       | 4.1       | 5.2    | 6.5  | -    | -    |   |
|                                  |                                      | Face Velocity, m/s  | -                 | -                                | 2.1       | 2.6       | 3.1       | 4.1    | 5.1  | -    | -    |   |
|                                  |                                      | Total Pressure Loss, Pa   | -                 | -                                | 2.5       | 4.0       | 5.0       | 10     | 15   | -    | -    |   |
|                                  |                                      | Noise Rating (NR)   | -                 | -                                | <20       | 23        | 27        | 34     | 37   | -    | -    |   |
|                                  |                                      | Temperature Quotient (1,2)  | -                 | -                                | 0.15/0.12 | 0.1/0.08  | 0.07/0.06 | 0.05/- | -    | -    | -    |   |
|                                  |                                      | Induction Ratio (1,2)   | -                 | -                                | 11/12     | 14/17     | 18/20     | 26/-   | -    | -    | -    |   |

| Grille Neck Size, mm             | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25              |                                  | NR35    |           | NR40      |           | NR45 |      |      |    |
|----------------------------------|--------------------------------------|---|-------------------|----------------------------------|---------|-----------|-----------|-----------|------|------|------|----|
|                                  |                                      |   | 200               | 250                              | 400     | 500       | 600       | 800       | 1000 | 2000 | 2500 |    |
| 375 x 375                        | 0.1406<br>(0.056)                    | Throw Distance (1) (0.30 m/s), m                                      | -                 | -                                | 1.8     | 3.5       | 4.0       | 5.5       | 7.0  | 13   | -    |    |
|                                  |                                      | Throw Distance (2) (0.30 m/s), m                                      | -                 | -                                | 1.3     | 2.7       | 3.4       | 4.5       | 5.5  | 11   | -    |    |
|                                  |                                      | Face Velocity, m/s  | -                 | -                                | 2.0     | 2.5       | 3.0       | 4.0       | 5.0  | 9.9  | -    |    |
|                                  |                                      | Total Pressure Loss, Pa   | -                 | -                                | 2.2     | 3.5       | 5.0       | 9.0       | 14   | 50   | -    |    |
|                                  |                                      | Noise Rating (NR)   | -                 | -                                | <20     | 23        | 27        | 34        | 38   | >50  | -    |    |
|                                  |                                      | Temperature Quotient (1,2)  | -                 | -                                | 0.24/-  | 0.08/0.12 | 0.06/0.09 | -/0.05    | -    | -    | -    |    |
|                                  |                                      | Induction Ratio (1,2)   | -                 | -                                | 7.5/4.5 | 16.5/13   | 19/16     | -/23      | -    | -    | -    |    |
|                                  |                                      | 375 x 450   | 0.1688<br>(0.068) | Throw Distance (1) (0.30 m/s), m | -       | -         | -         | 3.0       | 3.7  | 4.7  | 6.1  | 12 |
| Throw Distance (2) (0.30 m/s), m | -                                    |   |                   | -                                | -       | 2.7       | 3.5       | 4.5       | 5.6  | 11   | -    |    |
| Face Velocity, m/s               | -                                    |   |                   | -                                | -       | 2.0       | 2.5       | 3.3       | 4.1  | 8.2  | -    |    |
| Total Pressure Loss, Pa          | -                                    |   |                   | -                                | -       | 2.3       | 3.5       | 6.0       | 10   | 35   | -    |    |
| Noise Rating (NR)                | -                                    |   |                   | -                                | -       | <20       | 23        | 30        | 34   | 50   | -    |    |
| Temperature Quotient (1,2)       | -                                    |   |                   | -                                | -       | 0.12/0.14 | 0.08/0.09 | 0.05/0.06 | -    | -    | -    |    |
| Induction Ratio (1,2)            | -                                    |   |                   | -                                | -       | 12.5/11   | 17/15     | 22/20     | -    | -    | -    |    |

| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25 |     | NR35 |     | NR40      |           | NR45   |      |      |  |
|----------------------|--------------------------------------|---|------|-----|------|-----|-----------|-----------|--------|------|------|--|
|                      |                                      |   | 200  | 250 | 400  | 500 | 600       | 800       | 1000   | 2000 | 2500 |  |
| 450 x 450            | 0.2025<br>(0.081)                    | Throw Distance (1) (0.30 m/s), m                                      | -    | -   | -    | -   | 3.5       | 4.5       | 5.5    | 11   | 14   |  |
|                      |                                      | Throw Distance (2) (0.30 m/s), m                                      | -    | -   | -    | -   | 2.6       | 3.5       | 4.4    | 8.7  | 11   |  |
|                      |                                      | Face Velocity, m/s  | -    | -   | -    | -   | 2.1       | 2.7       | 3.4    | 6.9  | 8.6  |  |
|                      |                                      | Total Pressure Loss, Pa   | -    | -   | -    | -   | 2.4       | 4.5       | 6.5    | 26   | 36   |  |
|                      |                                      | Noise Rating (NR)   | -    | -   | -    | -   | 20        | 26        | 31     | 45   | >50  |  |
|                      |                                      | Temperature Quotient (1,2)  | -    | -   | -    | -   | 0.11/0.19 | 0.07/0.12 | -/0.07 | -    | -    |  |
|                      |                                      | Induction Ratio (1,2)   | -    | -   | -    | -   | 13/9      | 18/14     | -/18   | -    | -    |  |

# TECHNICAL PERFORMANCE DATA

## Supply - 3 Way Rectangular Diffuser



\* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

\* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.

\* Neck size given are in Height x Length.



| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25      |           | NR35   |        | NR40 |     | NR45 |      |      |
|----------------------|--------------------------------------|---|-----------|-----------|--------|--------|------|-----|------|------|------|
|                      |                                      |   | 200       | 250       | 400    | 500    | 600  | 800 | 1000 | 2000 | 2500 |
| 150 x 225            | 0.0338<br>(0.014)                    | Throw Distance (1) (0.30 m/s), m                                      | 2.7       | 3.5       | 5.5    | 7.0    | -    | -   | -    | -    | -    |
|                      |                                      | Throw Distance (2) (0.30 m/s), m                                      | 1.8       | 2.4       | 3.7    | 4.8    | -    | -   | -    | -    | -    |
|                      |                                      | Face Velocity, m/s  | 4.0       | 5.0       | 7.9    | 9.9    | -    | -   | -    | -    | -    |
|                      |                                      | Total Pressure Loss, Pa   | 9.0       | 14        | 32     | 52     | -    | -   | -    | -    | -    |
|                      |                                      | Noise Rating (NR)   | 27        | 33        | 44     | 48     | -    | -   | -    | -    | -    |
|                      |                                      | Temperature Quotient (1,2)  | 0.04/0.08 | 0.03/0.05 | -      | -      | -    | -   | -    | -    | -    |
|                      |                                      | Induction Ratio (1,2)   | 27/17     | -/24      | -      | -      | -    | -   | -    | -    | -    |
| 150 x 300            | 0.045<br>(0.018)                     | Throw Distance (1) (0.30 m/s), m                                      | 2.6       | 3.5       | 5.2    | 6.2    | 7.6  | -   | -    | -    | -    |
|                      |                                      | Throw Distance (2) (0.30 m/s), m                                      | <1.5      | 1.8       | 3.0    | 3.7    | 4.3  | -   | -    | -    | -    |
|                      |                                      | Face Velocity, m/s  | 3.1       | 3.9       | 6.2    | 7.7    | 9.3  | -   | -    | -    | -    |
|                      |                                      | Total Pressure Loss, Pa   | 5.5       | 9.0       | 22     | 32     | 48   | -   | -    | -    | -    |
|                      |                                      | Noise Rating (NR)   | 23        | 27        | 38     | 44     | 46   | -   | -    | -    | -    |
|                      |                                      | Temperature Quotient (1,2)  | 0.05/-    | 0.04/0.09 | -/0.04 | -/0.03 | -    | -   | -    | -    | -    |
|                      |                                      | Induction Ratio (1,2)   | 22/-      | 27/14     | -/26   | -      | -    | -   | -    | -    | -    |

| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25   |           | NR35      |           | NR40      |         | NR45   |      |      |
|----------------------|--------------------------------------|---|--------|-----------|-----------|-----------|-----------|---------|--------|------|------|
|                      |                                      |   | 200    | 250       | 400       | 500       | 600       | 800     | 1000   | 2000 | 2500 |
| 225 x 300            | 0.0675<br>(0.027)                    | Throw Distance (1) (0.30 m/s), m                                      | 2.0    | 2.6       | 4.1       | 5.0       | 6.1       | 8.0     | -      | -    | -    |
|                      |                                      | Throw Distance (2) (0.30 m/s), m                                      | <1.5   | 1.7       | 2.7       | 3.4       | 4.2       | 5.6     | -      | -    | -    |
|                      |                                      | Face Velocity, m/s  | 2.0    | 2.6       | 4.1       | 5.1       | 6.2       | 8.2     | -      | -    | -    |
|                      |                                      | Total Pressure Loss, Pa   | 2.3    | 4.0       | 10        | 13        | 22        | 36      | -      | -    | -    |
|                      |                                      | Noise Rating (NR)   | <20    | 20        | 31        | 35        | 40        | 47      | -      | -    | -    |
|                      |                                      | Temperature Quotient (1,2)  | 0.11/- | 0.07/0.14 | 0.03/0.07 | -/0.05    | -         | -       | -      | -    | -    |
|                      |                                      | Induction Ratio (1,2)   | 12.5/- | 17/10     | -/17      | -/26      | -         | -       | -      | -    | -    |
| 225 x 375            | 0.0844<br>(0.034)                    | Throw Distance (1) (0.30 m/s), m                                      | -      | 2.3       | 3.7       | 4.5       | 5.3       | 7.0     | 9.0    | -    | -    |
|                      |                                      | Throw Distance (2) (0.30 m/s), m                                      | -      | <1.5      | 2.6       | 2.7       | 3.4       | 4.3     | 5.7    | -    | -    |
|                      |                                      | Face Velocity, m/s  | -      | 2.0       | 3.3       | 4.1       | 4.9       | 6.5     | 8.2    | -    | -    |
|                      |                                      | Total Pressure Loss, Pa   | -      | 2.3       | 6.0       | 10        | 14        | 23      | 33     | -    | -    |
|                      |                                      | Noise Rating (NR)   | -      | <20       | 26        | 30        | 35        | 42      | 47     | -    | -    |
|                      |                                      | Temperature Quotient (1,2)  | -      | 0.12/-    | 0.05/0.09 | 0.04/0.09 | -/0.05    | -/0.035 | -      | -    | -    |
|                      |                                      | Induction Ratio (1,2)   | -      | 13/-      | 24/15     | -/16      | -/23      | -/30    | -      | -    | -    |
| 225 x 525            | 0.1181<br>(0.046)                    | Throw Distance (1) (0.30 m/s), m                                      | -      | -         | 3.2       | 4.2       | 4.8       | 6.2     | 8.0    | -    | -    |
|                      |                                      | Throw Distance (2) (0.30 m/s), m                                      | -      | -         | 1.6       | 2.0       | 2.4       | 3.2     | 4.0    | -    | -    |
|                      |                                      | Face Velocity, m/s  | -      | -         | 2.4       | 3.0       | 3.6       | 4.8     | 6.0    | -    | -    |
|                      |                                      | Total Pressure Loss, Pa   | -      | -         | 3.4       | 7.0       | 7.5       | 13      | 23     | -    | -    |
|                      |                                      | Noise Rating (NR)   | -      | -         | 22        | 26        | 30        | 37      | 42     | -    | -    |
|                      |                                      | Temperature Quotient (1,2)  | -      | -         | 0.08/0.25 | 0.05/0.17 | 0.04/0.13 | -/0.08  | -/0.05 | -    | -    |
|                      |                                      | Induction Ratio (1,2)   | -      | -         | 17/7      | 26/9.5    | 27/12     | -/16.5  | 23     | -    | -    |

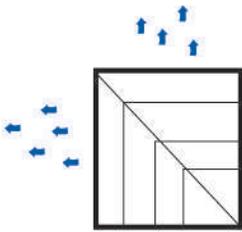
| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25 |     | NR35      |           | NR40      |        | NR45   |      |      |
|----------------------|--------------------------------------|---|------|-----|-----------|-----------|-----------|--------|--------|------|------|
|                      |                                      |   | 200  | 250 | 400       | 500       | 600       | 800    | 1000   | 2000 | 2500 |
| 300 x 375            | 0.1125<br>(0.046)                    | Throw Distance (1) (0.30 m/s), m                                      | -    | -   | 2.9       | 3.9       | 4.4       | 6.0    | 7.2    | -    | -    |
|                      |                                      | Throw Distance (2) (0.30 m/s), m                                      | -    | -   | 2.2       | 2.7       | 3.2       | 4.2    | 5.5    | -    | -    |
|                      |                                      | Face Velocity, m/s  | -    | -   | 2.4       | 3.0       | 3.6       | 4.8    | 6.0    | -    | -    |
|                      |                                      | Total Pressure Loss, Pa   | -    | -   | 3.4       | 7.0       | 7.5       | 13     | 23     | -    | -    |
|                      |                                      | Noise Rating (NR)   | -    | -   | 22        | 26        | 30        | 37     | 42     | -    | -    |
|                      |                                      | Temperature Quotient (1,2)  | -    | -   | 0.09/0.16 | 0.06/0.11 | 0.04/0.08 | -/0.05 | -      | -    | -    |
|                      |                                      | Induction Ratio (1,2)   | -    | -   | 15.5/10   | 23/16     | 26/17     | -/24   | -      | -    | -    |
| 300 x 450            | 0.135<br>(0.054)                     | Throw Distance (1) (0.30 m/s), m                                      | -    | -   | 2.8       | 3.6       | 4.4       | 5.8    | 7.2    | -    | -    |
|                      |                                      | Throw Distance (2) (0.30 m/s), m                                      | -    | -   | 1.8       | 2.3       | 2.6       | 3.8    | 4.7    | -    | -    |
|                      |                                      | Face Velocity, m/s  | -    | -   | 2.1       | 2.6       | 3.1       | 4.1    | 5.1    | -    | -    |
|                      |                                      | Total Pressure Loss, Pa   | -    | -   | 2.5       | 4.0       | 5.0       | 9.0    | 15     | -    | -    |
|                      |                                      | Noise Rating (NR)   | -    | -   | <20       | 23        | 27        | 34     | 38     | -    | -    |
|                      |                                      | Temperature Quotient (1,2)  | -    | -   | 0.12/0.22 | 0.08/0.17 | 0.06/0.14 | -/0.07 | -/0.05 | -    | -    |
|                      |                                      | Induction Ratio (1,2)   | -    | -   | 13/7.5    | 18/9.5    | 23/11     | -/19   | -/24   | -    | -    |

| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25 |     | NR35      |           | NR40     |        | NR45 |      |      |
|----------------------|--------------------------------------|---|------|-----|-----------|-----------|----------|--------|------|------|------|
|                      |                                      |   | 200  | 250 | 400       | 500       | 600      | 800    | 1000 | 2000 | 2500 |
| 375 x 450            | 0.1688<br>(0.068)                    | Throw Distance (1) (0.30 m/s), m                                      | -    | -   | 3.0       | 3.8       | 5.0      | 6.1    | 13   | -    | -    |
|                      |                                      | Throw Distance (2) (0.30 m/s), m                                      | -    | -   | 2.3       | 2.8       | 3.8      | 4.7    | 9.0  | -    | -    |
|                      |                                      | Face Velocity, m/s  | -    | -   | 2.0       | 2.5       | 3.3      | 4.1    | 8.2  | -    | -    |
|                      |                                      | Total Pressure Loss, Pa   | -    | -   | 2.2       | 3.5       | 6.0      | 9.0    | 35   | -    | -    |
|                      |                                      | Noise Rating (NR)   | -    | -   | <20       | 24        | 30       | 35     | 50   | -    | -    |
|                      |                                      | Temperature Quotient (1,2)  | -    | -   | 0.12/0.18 | 0.08/0.12 | 0.05/0.1 | -/0.06 | -    | -    | -    |
|                      |                                      | Induction Ratio (1,2)   | -    | -   | 13/7.7    | 17/11.5   | 23/16.5  | -/22   | -    | -    | -    |

| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25 |     | NR35 |     | NR40      |        | NR45 |      |      |
|----------------------|--------------------------------------|---|------|-----|------|-----|-----------|--------|------|------|------|
|                      |                                      |   | 200  | 250 | 400  | 500 | 600       | 800    | 1000 | 2000 | 2500 |
| 450 x 525            | 0.2363<br>(0.095)                    | Throw Distance (1) (0.30 m/s), m                                      | -    | -   | -    | -   | 4.0       | 5.6    | 10   | 14   | -    |
|                      |                                      | Throw Distance (2) (0.30 m/s), m                                      | -    | -   | -    | -   | 3.0       | 4.1    | 7.5  | 10   | -    |
|                      |                                      | Face Velocity, m/s  | -    | -   | -    | -   | 2.3       | 3.0    | 5.8  | 7.3  | -    |
|                      |                                      | Total Pressure Loss, Pa   | -    | -   | -    | -   | 3.0       | 5.0    | 17   | 27   | -    |
|                      |                                      | Noise Rating (NR)   | -    | -   | -    | -   | 24        | 29     | 44   | 50   | -    |
|                      |                                      | Temperature Quotient (1,2)  | -    | -   | -    | -   | 0.07/0.12 | -/0.06 | -    | -    | -    |
|                      |                                      | Induction Ratio (1,2)   | -    | -   | -    | -   | 17/12.5   | -/18   | -    | -    | -    |

# TECHNICAL PERFORMANCE DATA

## Supply - 2 Way Square Diffuser (Type A)



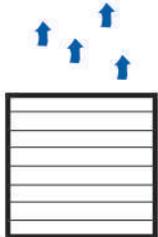
\* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

\* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.



| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25      |           | NR35      |           | NR45       |            |             |             |             |   |
|----------------------|--------------------------------------|---|-----------|-----------|-----------|-----------|------------|------------|-------------|-------------|-------------|---|
|                      |                                      |   | 100<br>28 | 150<br>42 | 200<br>56 | 250<br>70 | 500<br>140 | 800<br>224 | 1000<br>280 | 1500<br>420 | 2000<br>560 |   |
| 150 x 225            | 0.0225<br>(0.008)                    | Throw Distance (0.25 m/s), m  | 2.6       | 4.0       | 5.2       | 6.5       | -          | -          | -           | -           | -           | - |
|                      |                                      | Face Velocity, m/s  | 3.5       | 5.2       | 6.9       | 8.7       | -          | -          | -           | -           | -           | - |
|                      |                                      | Total Pressure Loss, Pa   | 7.0       | 16        | 27        | 37        | -          | -          | -           | -           | -           | - |
|                      |                                      | Noise Rating (NR)   | 22        | 31        | 37        | 42        | -          | -          | -           | -           | -           | - |
|                      |                                      | Temperature Quotient  | <0.015    | <0.015    | <0.015    | <0.015    | -          | -          | -           | -           | -           | - |
|                      |                                      | Induction Ratio   | >30       | >30       | >30       | >30       | -          | -          | -           | -           | -           | - |
| 225 x 225            | 0.0506<br>(0.018)                    | Throw Distance (0.25 m/s), m  | -         | 2.6       | 3.5       | 4.5       | 8.5        | -          | -           | -           | -           |   |
|                      |                                      | Face Velocity, m/s  | -         | 2.3       | 3.1       | 3.9       | 7.7        | -          | -           | -           | -           |   |
|                      |                                      | Total Pressure Loss, Pa   | -         | 3.0       | 5.5       | 8.0       | 30         | -          | -           | -           | -           |   |
|                      |                                      | Noise Rating (NR)   | -         | <20       | 23        | 28        | 44         | -          | -           | -           | -           |   |
|                      |                                      | Temperature Quotient  | -         | 0.052     | 0.03      | 0.022     | -          | -          | -           | -           | -           |   |
|                      |                                      | Induction Ratio   | -         | 23        | >30       | >30       | -          | -          | -           | -           | -           |   |
| 300 x 300            | 0.09<br>(0.032)                      | Throw Distance (0.25 m/s), m  | -         | -         | -         | 3.2       | 6.5        | 10.5       | 13          | -           | -           |   |
|                      |                                      | Face Velocity, m/s  | -         | -         | -         | 2.2       | 4.3        | 6.9        | 8.7         | -           | -           |   |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | -         | 2.5       | 10         | 27         | 38          | -           | -           |   |
|                      |                                      | Noise Rating (NR)   | -         | -         | -         | <20       | 32         | 43         | 49          | -           | -           |   |
|                      |                                      | Temperature Quotient  | -         | -         | -         | 0.055     | -          | -          | -           | -           | -           |   |
|                      |                                      | Induction Ratio   | -         | -         | -         | 21        | -          | -          | -           | -           | -           |   |
| 375 x 375            | 0.141<br>(0.050)                     | Throw Distance (0.25 m/s), m  | -         | -         | -         | -         | 5.2        | 8.2        | 11          | 16          | -           |   |
|                      |                                      | Face Velocity, m/s  | -         | -         | -         | -         | 2.8        | 4.4        | 5.6         | 8.3         | -           |   |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | -         | -         | 4.5        | 13         | 17          | 33          | -           |   |
|                      |                                      | Noise Rating (NR)   | -         | -         | -         | -         | 25         | 36         | 41          | 50          | -           |   |
|                      |                                      | Temperature Quotient  | -         | -         | -         | -         | -          | -          | -           | -           | -           |   |
|                      |                                      | Induction Ratio   | -         | -         | -         | -         | -          | -          | -           | -           | -           |   |
| 450 x 450            | 0.2025<br>(0.071)                    | Throw Distance (0.25 m/s), m  | -         | -         | -         | -         | 4.5        | 7.0        | 9.0         | 13          | 17          |   |
|                      |                                      | Face Velocity, m/s  | -         | -         | -         | -         | 2.0        | 3.1        | 3.9         | 5.9         | 7.8         |   |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | -         | -         | 2.2        | 5.5        | 9.0         | 20          | 30          |   |
|                      |                                      | Noise Rating (NR)   | -         | -         | -         | -         | <20        | 28         | 34          | 43          | 50          |   |
|                      |                                      | Temperature Quotient  | -         | -         | -         | -         | 0.065      | -          | -           | -           | -           |   |
|                      |                                      | Induction Ratio   | -         | -         | -         | -         | 19         | -          | -           | -           | -           |   |
| 525 x 525            | 0.276<br>(0.100)                     | Throw Distance (0.25 m/s), m  | -         | -         | -         | -         | -          | 6.2        | 7.5         | 12          | 14.5        |   |
|                      |                                      | Face Velocity, m/s  | -         | -         | -         | -         | -          | 2.2        | 2.8         | 4.2         | 5.6         |   |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | -         | -         | -          | 2.7        | 4.5         | 10          | 16          |   |
|                      |                                      | Noise Rating (NR)   | -         | -         | -         | -         | -          | 23         | 28          | 37          | 43          |   |
|                      |                                      | Temperature Quotient  | -         | -         | -         | -         | -          | -          | -           | -           | -           |   |
|                      |                                      | Induction Ratio   | -         | -         | -         | -         | -          | -          | -           | -           | -           |   |

## Supply - 1 Way Square Diffuser (Type B)



\* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

\* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.



| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s | NR25      |           | NR35      |           | NR40       |            | NR45        |             |
|----------------------|--------------------------------------|---|-----------|-----------|-----------|-----------|------------|------------|-------------|-------------|
|                      |                                      |   | 100<br>28 | 150<br>42 | 200<br>56 | 250<br>70 | 500<br>140 | 800<br>224 | 1000<br>280 | 1500<br>420 |
| 150 x 225            | 0.0338<br>(0.012)                    | Throw Distance (0.25 m/s), m  | 2.1       | 3.2       | 4.2       | 5.2       | -          | -          | -           | -           |
|                      |                                      | Face Velocity, m/s  | 2.3       | 3.5       | 4.6       | 5.8       | -          | -          | -           | -           |
|                      |                                      | Total Pressure Loss, Pa   | 3.0       | 7.0       | 12        | 17        | -          | -          | -           | -           |
|                      |                                      | Noise Rating (NR)   | <20       | 24        | 30        | 35        | -          | -          | -           | -           |
|                      |                                      | Temperature Quotient  | 0.05      | 0.022     | 0.015     | -         | -          | -          | -           | -           |
|                      |                                      | Induction Ratio   | 24        | -         | -         | -         | -          | -          | -           | -           |
| 150 x 300            | 0.045<br>(0.016)                     | Throw Distance (0.25 m/s), m  | -         | 2.7       | 3.5       | 4.5       | 8.8        | -          | -           | -           |
|                      |                                      | Face Velocity, m/s  | -         | 2.6       | 3.5       | 4.3       | 8.7        | -          | -           | -           |
|                      |                                      | Total Pressure Loss, Pa   | -         | 4.0       | 7.0       | 12        | 38         | -          | -           | -           |
|                      |                                      | Noise Rating (NR)   | -         | <20       | 24        | 28        | 45         | -          | -           | -           |
|                      |                                      | Temperature Quotient  | -         | 0.04      | 0.017     | -         | -          | -          | -           | -           |
|                      |                                      | Induction Ratio   | -         | 27        | -         | -         | -          | -          | -           | -           |
| 150 x 375            | 0.0563<br>(0.020)                    | Throw Distance (0.25 m/s), m  | -         | 2.5       | 3.3       | 4.0       | 8.2        | -          | -           | -           |
|                      |                                      | Face Velocity, m/s  | -         | 2.0       | 2.8       | 3.5       | 6.9        | -          | -           | -           |
|                      |                                      | Total Pressure Loss, Pa   | -         | 2.3       | 4.5       | 7.0       | 25         | -          | -           | -           |
|                      |                                      | Noise Rating (NR)   | -         | <20       | 21        | 25        | 42         | -          | -           | -           |
|                      |                                      | Temperature Quotient  | -         | 0.06      | 0.037     | 0.025     | -          | -          | -           | -           |
|                      |                                      | Induction Ratio   | -         | 21        | 27        | -         | -          | -          | -           | -           |
| 225 x 300            | 0.0675<br>(0.024)                    | Throw Distance (0.25 m/s), m  | -         | -         | 3.0       | 3.8       | 7.5        | 12         | -           | -           |
|                      |                                      | Face Velocity, m/s  | -         | -         | 2.3       | 2.9       | 5.8        | 9.3        | -           | -           |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | 3.2       | 5.0       | 17         | 45         | -           | -           |
|                      |                                      | Noise Rating (NR)   | -         | -         | <20       | 22        | 38         | 48         | -           | -           |
|                      |                                      | Temperature Quotient  | -         | -         | 0.05      | 0.03      | -          | -          | -           | -           |
|                      |                                      | Induction Ratio   | -         | -         | 13        | -         | -          | -          | -           | -           |
| 225 x 450            | 0.09<br>(0.036)                      | Throw Distance (0.25 m/s), m  | -         | -         | -         | 3.2       | 6.0        | 9.7        | 13          | -           |
|                      |                                      | Face Velocity, m/s  | -         | -         | -         | 1.9       | 3.9        | 6.2        | 7.7         | -           |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | -         | 2.0       | 8.0        | 22         | 30          | -           |
|                      |                                      | Noise Rating (NR)   | -         | -         | -         | <20       | 32         | 43         | 46          | -           |
|                      |                                      | Temperature Quotient  | -         | -         | -         | 0.065     | -          | -          | -           | -           |
|                      |                                      | Induction Ratio   | -         | -         | -         | 19        | -          | -          | -           | -           |
| 225 x 525            | 0.1181<br>(0.041)                    | Throw Distance (0.25 m/s), m  | -         | -         | -         | 2.8       | 5.7        | 9.0        | 12          | -           |
|                      |                                      | Face Velocity, m/s  | -         | -         | -         | 1.7       | 3.4        | 5.4        | 6.8         | -           |
|                      |                                      | Total Pressure Loss, Pa   | -         | -         | -         | <2        | 7.0        | 16         | 25          | -           |
|                      |                                      | Noise Rating (NR)   | -         | -         | -         | <20       | 27         | 40         | 44          | -           |
|                      |                                      | Temperature Quotient  | -         | -         | -         | 0.09      | -          | -          | -           | -           |
|                      |                                      | Induction Ratio   | -         | -         | -         | 15        | -          | -          | -           | -           |

**TECHNICAL PERFORMANCE DATA**

**Supply - 2 Way Square Diffuser (Type B)**

|           |                   |                              |   |   |   | NR25 |     | NR45 |     |     |   |
|-----------|-------------------|------------------------------|---|---|---|------|-----|------|-----|-----|---|
| 300 x 300 | 0.09<br>(0.032)   | Throw Distance (0.25 m/s), m | - | - | - | 3.5  | 6.5 | 11   | 13  | -   | - |
|           |                   | Face Velocity, m/s           | - | - | - | 2.2  | 4.3 | 6.9  | 8.7 | -   | - |
|           |                   | Total Pressure Loss, Pa      | - | - | - | 3.5  | 10  | 27   | 38  | -   | - |
|           |                   | Noise Rating (NR)            | - | - | - | <20  | 34  | 44   | 49  | -   | - |
|           |                   | Temperature Quotient         | - | - | - | 0.05 | -   | -    | -   | -   | - |
|           |                   | Induction Ratio              | - | - | - | 24   | -   | -    | -   | -   | - |
| 300 x 375 | 0.1125<br>(0.039) | Throw Distance (0.25 m/s), m | - | - | - | 2.8  | 5.7 | 9.0  | 12  | -   | - |
|           |                   | Face Velocity, m/s           | - | - | - | 1.8  | 3.6 | 5.7  | 7.2 | -   | - |
|           |                   | Total Pressure Loss, Pa      | - | - | - | <2   | 7.0 | 18   | 27  | -   | - |
|           |                   | Noise Rating (NR)            | - | - | - | <20  | 27  | 40   | 44  | -   | - |
|           |                   | Temperature Quotient         | - | - | - | 0.09 | -   | -    | -   | -   | - |
|           |                   | Induction Ratio              | - | - | - | 15   | -   | -    | -   | -   | - |
| 300 x 450 | 0.135<br>(0.047)  | Throw Distance (0.25 m/s), m | - | - | - | -    | 5.3 | 8.3  | 11  | 16  | - |
|           |                   | Face Velocity, m/s           | - | - | - | -    | 3.0 | 4.7  | 5.9 | 8.9 | - |
|           |                   | Total Pressure Loss, Pa      | - | - | - | -    | 5.0 | 13   | 19  | 40  | - |
|           |                   | Noise Rating (NR)            | - | - | - | -    | 25  | 36   | 41  | 50  | - |
|           |                   | Temperature Quotient         | - | - | - | -    | -   | -    | -   | -   | - |
|           |                   | Induction Ratio              | - | - | - | -    | -   | -    | -   | -   | - |

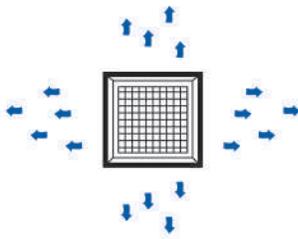
|           |                   |                              |   |   |   | NR25 |     | NR45 |     |     |   |
|-----------|-------------------|------------------------------|---|---|---|------|-----|------|-----|-----|---|
| 375 x 375 | 0.1406<br>(0.049) | Throw Distance (0.25 m/s), m | - | - | - | -    | 5.3 | 8.3  | 11  | 16  | - |
|           |                   | Face Velocity, m/s           | - | - | - | -    | 3.0 | 4.7  | 5.9 | 8.9 | - |
|           |                   | Total Pressure Loss, Pa      | - | - | - | -    | 5.0 | 13   | 19  | 40  | - |
|           |                   | Noise Rating (NR)            | - | - | - | -    | 25  | 36   | 41  | 50  | - |
|           |                   | Temperature Quotient         | - | - | - | -    | -   | -    | -   | -   | - |
|           |                   | Induction Ratio              | - | - | - | -    | -   | -    | -   | -   | - |

|           |                   |                              |   |   |   | NR25 |       | NR35 |     | NR45 |     |
|-----------|-------------------|------------------------------|---|---|---|------|-------|------|-----|------|-----|
| 450 x 450 | 0.2025<br>(0.071) | Throw Distance (0.25 m/s), m | - | - | - | -    | 4.5   | 7.0  | 8.2 | 13   | 17  |
|           |                   | Face Velocity, m/s           | - | - | - | -    | 2.0   | 3.1  | 3.9 | 5.9  | 7.8 |
|           |                   | Total Pressure Loss, Pa      | - | - | - | -    | 2.2   | 5.5  | 9.0 | 20   | 30  |
|           |                   | Noise Rating (NR)            | - | - | - | -    | <20   | 28   | 33  | 42   | 49  |
|           |                   | Temperature Quotient         | - | - | - | -    | 0.065 | -    | -   | -    | -   |
|           |                   | Induction Ratio              | - | - | - | -    | 19    | -    | -   | -    | -   |

|           |                   |                              |   |   |   | NR25 |     | NR35 |     | NR45 |  |
|-----------|-------------------|------------------------------|---|---|---|------|-----|------|-----|------|--|
| 525 x 525 | 0.2756<br>(0.097) | Throw Distance (0.25 m/s), m | - | - | - | -    | 6.0 | 7.8  | 12  | 15   |  |
|           |                   | Face Velocity, m/s           | - | - | - | -    | 2.3 | 2.9  | 4.3 | 5.7  |  |
|           |                   | Total Pressure Loss, Pa      | - | - | - | -    | 3.0 | 5.0  | 12  | 17   |  |
|           |                   | Noise Rating (NR)            | - | - | - | -    | 24  | 27   | 36  | 45   |  |
|           |                   | Temperature Quotient         | - | - | - | -    | -   | -    | -   | -    |  |
|           |                   | Induction Ratio              | - | - | - | -    | -   | -    | -   | -    |  |

# TECHNICAL PERFORMANCE DATA

## Supply - DDCD Diffuser



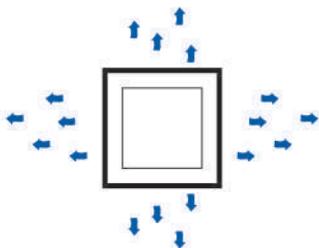
\* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

\* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.



| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s   | NR25                                  |   | NR35                                      |   | NR40                                      |  | NR45                                   |                              |                             |  |
|----------------------|--------------------------------------|---|---------------------------------------|---|---|---|---|--|--|------------------------------|-----------------------------|--|
|                      |                                      |   | 110                                   | 165                                     | 220                                       | 275                                       | 550                                       | 880                                    | 1100                                   | 2200                         | 3300                        |  |
| 150 x 150            | 0.0225 (0.010)                       | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | 1.2<br>3.0<br>5.0<br>20<br>0.12<br>13 | 1.8<br>4.6<br>13<br>30<br>0.05<br>23    | 2.4<br>6.2<br>22<br>36<br>0.027<br>>30    | 3.0<br>7.7<br>32<br>42<br>0.022<br>>30    | -<br>-<br>-<br>-<br>-<br>-                | -<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-   | -<br>-<br>-<br>-<br>-<br>-  |  |
| 225 x 225            | 0.0506 (0.022)                       | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-            | 1.2<br>2.1<br>2.5<br><20<br>0.23<br>8.0 | 1.6<br>2.8<br>4.7<br>22<br>0.13<br>11     | 2.1<br>3.5<br>7.0<br>26<br>0.08<br>16     | 4.0<br>6.9<br>26<br>42<br>0.025<br>>30    | -<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-             | -<br>-<br>-<br>-<br>-<br>-   | -<br>-<br>-<br>-<br>-<br>-  |  |
| 300 x 300            | 0.09 (0.041)                         | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-            | -<br>-<br>-<br>-<br>-<br>-              | 1.2<br>1.5<br><2.0<br><20<br>>0.25<br>5.0 | 1.5<br>1.9<br>2.2<br>32<br>0.20<br>7.5    | 3.0<br>3.9<br>8.2<br>42<br>0.07<br>18     | 4.8<br>6.2<br>22<br>47<br>0.035<br>>30 | 5.8<br>7.7<br>32<br>47<br><0.03<br>>30 | -<br>-<br>-<br>-<br>-<br>-   | -<br>-<br>-<br>-<br>-<br>-  |  |
| 375 x 375            | 0.141 (0.064)                        | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-            | -<br>-<br>-<br>-<br>-<br>-              | -<br>-<br>-<br>-<br>-<br>-                | 1.3<br>1.2<br><2.0<br><20<br>>0.25<br>4.0 | 2.4<br>2.5<br>3.5<br>34<br>0.14<br>11     | 3.9<br>4.0<br>9.0<br>38<br>0.065<br>20 | 4.8<br>5.0<br>14<br>38<br>0.045<br>25  | 9.0<br>9.9<br>55<br>>50<br>- | -<br>-<br>-<br>-<br>-<br>-  |  |
| 450 x 450            | 0.2025 (0.089)                       | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-            | -<br>-<br>-<br>-<br>-<br>-              | -<br>-<br>-<br>-<br>-<br>-                | -<br>-<br>-<br>-<br>-<br>-                | 2.1<br>1.7<br><2.0<br><20<br>>0.25<br>6.5 | 3.5<br>2.7<br>4.2<br>27<br>0.11<br>13  | 4.0<br>3.4<br>7.0<br>32<br>0.09<br>16  | 8.0<br>6.9<br>27<br>47<br>-  | -<br>-<br>-<br>-<br>-<br>-  |  |
| 525 x 525            | 0.276 (0.121)                        | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-            | -<br>-<br>-<br>-<br>-<br>-              | -<br>-<br>-<br>-<br>-<br>-                | -<br>-<br>-<br>-<br>-<br>-                | 1.8<br>1.3<br><2.0<br><20<br>>0.25<br>2.7 | 2.7<br>2.0<br>2.2<br>26<br>0.23<br>7.5 | 3.5<br>2.5<br>3.5<br>26<br>0.15<br>11  | 7.0<br>5.1<br>15<br>43<br>-  | 10<br>7.6<br>32<br>>50<br>- |  |

## Supply - CDP Diffuser



\* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

\* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.



| Grille Neck Size, mm | Neck Area (Eff. Area) m <sup>2</sup> | Unit Volume Flowrate, m <sup>3</sup> /hr<br>Unit Volume Flowrate, l/s   | NR25                            |                                 | NR35                             |                                 |                                  |                                  |                                  |                                  |                                  |
|----------------------|--------------------------------------|---|---------------------------------|---------------------------------|----------------------------------|---------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|                      |                                      |   | 100                             | 150                             | 200                              | 300                             | 500                              | 800                              | 1000                             | 1500                             | 2000                             |
| 350 x 350            | 0.1225 (0.0530)                      | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | 3.6<br>2.3<br>8<br>36<br>-<br>- | 3.9<br>2.5<br>9<br>37<br>-<br>- | 4.2<br>2.7<br>10<br>38<br>-<br>- | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-       | -<br>-<br>-<br>-<br>-<br>-       | -<br>-<br>-<br>-<br>-<br>-       | -<br>-<br>-<br>-<br>-<br>-       |                                  |
| 400 x 400            | 0.16 (0.0692)                        | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-      | 3.2<br>2.1<br>8<br>30<br>-<br>-  | 3.7<br>2.4<br>9<br>32<br>-<br>- | 4.5<br>3.0<br>11<br>35<br>-<br>- | 3.8<br>4.0<br>16<br>44<br>-<br>- | -<br>-<br>-<br>-<br>-<br>-       | -<br>-<br>-<br>-<br>-<br>-       |                                  |
| 450 x 450            | 0.2025 (0.0876)                      | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-       | -<br>-<br>-<br>-<br>-<br>-      | 3.6<br>2.4<br>9<br>28<br>-<br>-  | 4.6<br>3.2<br>13<br>35<br>-<br>- | 5.3<br>3.7<br>15<br>40<br>-<br>- | 7.1<br>4.9<br>21<br>45<br>-<br>- |                                  |
| 500 x 500            | 0.25 (0.1081)                        | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-       | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-       | 3.7<br>2.6<br>11<br>28<br>-<br>- | 4.3<br>3.0<br>12<br>32<br>-<br>- | 5.8<br>4.0<br>17<br>37<br>-<br>- | 7.1<br>5.0<br>22<br>45<br>-<br>- |
| 550 x 550            | 0.3025 (0.1308)                      | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-       | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-       | 3.1<br>2.1<br>9<br>23<br>-<br>-  | 3.6<br>2.5<br>10<br>27<br>-<br>- | 4.8<br>3.3<br>14<br>30<br>-<br>- | 5.9<br>4.1<br>18<br>37<br>-<br>- |
| 600 x 600            | 0.36 (0.1557)                        | Throw Distance (0.37 m/s), m<br>Face Velocity, m/s<br>Total Pressure Loss, Pa<br>Noise Rating (NR)<br>Temperature Quotient<br>Induction Ratio | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-       | -<br>-<br>-<br>-<br>-<br>-      | -<br>-<br>-<br>-<br>-<br>-       | 2.1<br>1.5<br>6<br>16<br>-<br>-  | 2.4<br>1.7<br>7<br>18<br>-<br>-  | 3.3<br>2.3<br>10<br>20<br>-<br>- | 4.1<br>2.8<br>13<br>25<br>-<br>- |

## ALUMINIUM CEILING DIFFUSERS TECHNICAL SPECIFICATION

### Frame Construction

1. Frame to be in extruded aluminium. Frame thickness should be in minimum 1.2mm thick, unless otherwise stated.
2. The margin to be in 75mm from the neck height to the edge.
3. Frame height to be in 25mm.
4. The corner of the frame should be pressed with a 90° corner piece to ensure the frames are in 90°.
5. Core to be able to remove from the frame to adjust the damper.

### Core Construction

1. Vanes to be in extruded aluminium.
2. Vanes to be in 1.2mm thick. 6 layer of vanes with fixed pattern for directional air distribution, unless otherwise stated.

### Finishing

1. Finishing should be in powder coated RAL 9010 SG white matt, unless otherwise stated.

### Performance

1. Free area of the grill to be in 40%.
2. Fixed pattern multi-vanes for directional air distribution.
3. Ceiling Diffusers are designed to be ceiling mounted, square opposed blade damper or round duct connection with damper should to be installed at the neck of the diffuser for volume control purpose, unless otherwise stated.

## GALVANIZED STEEL CEILING DIFFUSERS TECHNICAL SPECIFICATION

### Frame Construction

1. Frame to be in galvanized steel. Frame thickness should be in minimum 0.6mm thick, unless otherwise stated.
2. The margin to be in 75mm from the neck height to the edge.
3. Frame height to be in 50mm.
4. Core to be able to remove from the frame to adjust the damper.

### Core Construction

1. Vanes to be in galvanized steel.
2. Vanes to be in 0.6mm thick. 6 layer of vanes with fixed pattern for directional air distribution, unless otherwise stated.

### Finishing

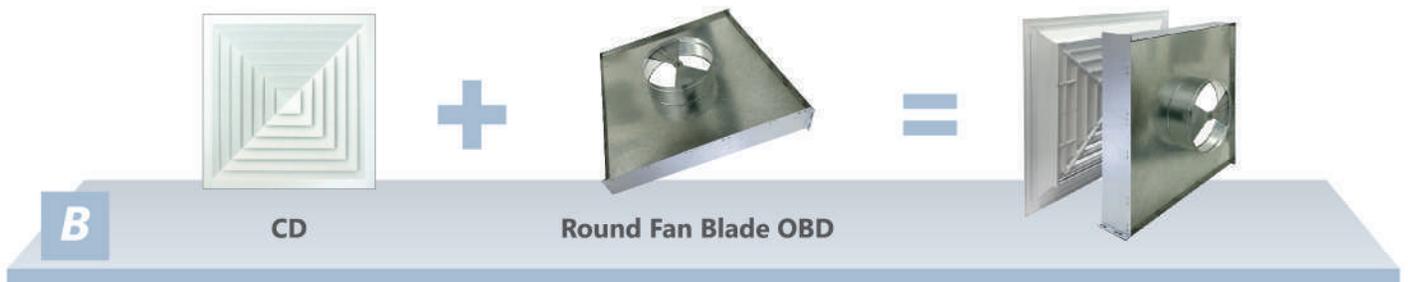
1. Finishing should be in powder coated RAL 9010 SG white matt, unless otherwise stated.

### Performance

1. Free area of the grill to be in 40%.
2. Fixed pattern multi-vanes for directional air distribution.
3. Ceiling Diffusers are designed to be ceiling mounted, square opposed blade damper or round duct connection with damper should to be installed at the neck of the diffuser for volume control purpose, unless otherwise stated.



## DIFFUSER + ACCESSORIES COMBINATION





# CD | Ceiling Diffuser



## Products Range

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- Diffusers 
- Dampers 
- Fire & Smoke Protection 
- VAV 
- Others 
- Accessories 



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