



# The Comfort First Filtered Diffuser™

## Specification Sheet



### PERFORMANCE DATA\*

| Velocity (fpm) |                     | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  |
|----------------|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 6"             | Flow Rate (cfm)     | 59    | 79    | 98    | 118   | 137   | 157   | 177   | 196   |
|                | Pressure Drop (sp)  | 0.076 | 0.107 | 0.144 | 0.176 | 0.215 | 0.257 | 0.301 | 0.343 |
|                | Noise Criteria (nc) | <20   | <20   | 22    | 27    | 32    | 36    | 40    | 43    |
| 8"             | Flow Rate (cfm)     | 105   | 140   | 174   | 209   | 244   | 279   | 314   | 349   |
|                | Pressure Drop (sp)  | 0.076 | 0.107 | 0.144 | 0.176 | 0.215 | 0.257 | 0.301 | 0.343 |
|                | Noise Criteria (nc) | <20   | <20   | 24    | 29    | 34    | 37    | 41    | 44    |
| 10"            | Flow Rate (cfm)     | 164   | 218   | 273   | 327   | 382   | 436   | 491   | 545   |
|                | Pressure Drop (sp)  | 0.076 | 0.107 | 0.144 | 0.176 | 0.215 | 0.257 | 0.301 | 0.343 |
|                | Noise Criteria (nc) | <20   | 20    | 26    | 31    | 36    | 39    | 43    | 46    |
| 12"            | Flow Rate (cfm)     | 236   | 314   | 393   | 471   | 550   | 628   | 707   | 785   |
|                | Pressure Drop (sp)  | 0.076 | 0.107 | 0.144 | 0.176 | 0.215 | 0.257 | 0.301 | 0.343 |
|                | Noise Criteria (nc) | <20   | 21    | 27    | 32    | 37    | 40    | 44    | 47    |
| 14"            | Flow Rate (cfm)     | 321   | 427   | 534   | 641   | 748   | 855   | 962   | 1068  |
|                | Pressure Drop (sp)  | 0.076 | 0.107 | 0.144 | 0.176 | 0.215 | 0.257 | 0.301 | 0.343 |
|                | Noise Criteria (nc) | <21   | 27    | 32    | 38    | 43    | 46    | >50   | >50   |

### Filter Efficiency vs. Particle Diameter MERV Rating = 12

| Size Range (µm) | Initial Fractional Efficiency (%) |         |
|-----------------|-----------------------------------|---------|
|                 | 150 fpm                           | 250 fpm |
| 0.3 – 0.4       | 40.6                              | 31.1    |
| 0.4 – 0.55      | 50.3                              | 42.5    |
| 0.55 – 0.7      | 60.1                              | 54.6    |
| 0.7 – 1.0       | 70.3                              | 67.0    |
| 1.0 – 1.3       | 78.4                              | 75.5    |
| 1.3 – 1.6       | 82.4                              | 79.9    |
| 1.6 – 2.2       | 86.5                              | 82.9    |
| 2.2 – 3.0       | 89.6                              | 84.4    |
| 3.0 – 4.0       | 92.3                              | 85.5    |
| 4.0 – 5.5       | 94.1                              | 86.4    |
| 5.5 – 7.0       | 95.1                              | 87.2    |
| 7.0 – 10.0      | 95.9                              | 87.9    |

Test results certified by LMS Technologies

\*Data extrapolated from tests conducted on an 8" Comfort First Filtered Diffuser™ with filters installed

### Comfort First Filtered Diffuser™

Throw Data and Velocity in Feet Per Minute (fpm)

| Distance From Ceiling Inches | Distance from diffuser (in feet) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|------------------------------|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|                              | 1'                               | 2'  | 3'  | 4'  | 5'  | 6'  | 7'  | 8'  | 9'  | 10' | 11' | 12' | 13' | 14' | 15' | 16' | 17' | 18' | 19' |  |
| 1                            | 340                              | 310 | 265 | 240 | 210 | 180 | 170 | 150 | 130 | 120 | 105 | 95  | 90  | 80  | 75  | 70  | 60  | 50  |     |  |
| 3                            | 145                              | 170 | 190 | 190 | 170 | 155 | 150 | 135 | 120 | 110 | 105 | 95  | 85  | 75  | 70  | 65  | 60  | 55  |     |  |
| 6                            | 55                               | 65  | 85  | 85  | 85  | 90  | 95  | 95  | 80  | 90  | 80  | 80  | 70  | 60  | 55  | 55  | 50  |     |     |  |
| 9                            | 55                               |     |     |     |     |     | 50  | 50  | 55  | 55  | 50  | 55  | 55  | 50  |     |     |     |     |     |  |
| 12                           | 80                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| 18                           | 150                              |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| 24                           | 55                               | 65  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| 30                           |                                  | 95  | 50  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| 36                           |                                  | 80  | 70  | 50  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| 42                           |                                  |     | 65  | 60  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| 48                           |                                  |     | 50  | 65  | 50  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| 54                           |                                  |     |     | 55  | 50  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| 60                           |                                  |     |     | 50  | 50  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |

#### Test Conditions

Air Volume (CFM) 300  
 Inlet Static Pressure (in. of H<sub>2</sub>O) 0.060"  
 Room Ambient Temp. (Deg. F) 74 ± 2  
 Supply Air Temp. (Deg. F) 74 ± 2  
 Inlet Dimensions: 10 inch diameter

Test results certified by Intertek ETL Semko

FPM Horizontal Throw (vanes parallel to ceiling)  
 FPM Downward Throw (vanes diagonal to ceiling)

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