

# PERFORMANCE DATA

## 1-Way Deflection

| Size       | Static Pressure (in. w.g.) | 0.010    | 0.022    | 0.040    | 0.063    | 0.089    | 0.121    | 0.159    |
|------------|----------------------------|----------|----------|----------|----------|----------|----------|----------|
| 3 1/2 in.  | Flow Rate (cfm/ft)         | 21       | 32       | 42       | 53       | 64       | 74       | 85       |
|            | Sound (NC)                 | -        | 18       | 26       | 31       | 36       | 40       | 44       |
|            | Throw (ft.)                |          |          |          |          |          |          |          |
|            | Ceiling                    | 6-10-14  | 9-14-19  | 10-16-22 | 12-18-25 | 14-21-28 | 15-22-30 | 16-24-32 |
|            | Sidewall                   | 3-8-13   | 7-12-17  | 9-14-19  | 11-16-21 | 13-18-23 | 14-19-24 | 16-20-25 |
| 4 1/4 in.  | Flow Rate (cfm/ft)         | 30       | 46       | 61       | 76       | 91       | 106      | 122      |
|            | Sound (NC)                 | -        | 20       | 28       | 33       | 38       | 42       | 46       |
|            | Throw (ft.)                |          |          |          |          |          |          |          |
|            | Ceiling                    | 6-10-15  | 9-15-21  | 11-18-25 | 13-20-27 | 15-22-30 | 17-25-33 | 18-27-36 |
|            | Sidewall                   | 3-8-13   | 7-12-17  | 9-14-19  | 11-16-21 | 13-18-23 | 14-19-24 | 16-20-25 |
| 5 in.      | Flow Rate (cfm/ft)         | 40       | 61       | 81       | 101      | 121      | 142      | 162      |
|            | Sound (NC)                 | -        | 21       | 29       | 34       | 39       | 43       | 47       |
|            | Throw (ft.)                |          |          |          |          |          |          |          |
|            | Ceiling                    | 6-12-18  | 10-16-23 | 12-19-27 | 15-23-31 | 17-25-34 | 18-27-37 | 20-29-39 |
|            | Sidewall                   | 3-8-13   | 7-12-17  | 9-14-19  | 11-16-21 | 13-18-23 | 15-20-25 | 16-21-26 |
| 5 3/4 in.  | Flow Rate (cfm/ft)         | 52       | 79       | 105      | 131      | 157      | 183      | 210      |
|            | Sound (NC)                 | -        | 22       | 30       | 35       | 40       | 44       | 48       |
|            | Throw (ft.)                |          |          |          |          |          |          |          |
|            | Ceiling                    | 8-14-20  | 12-19-26 | 15-23-31 | 17-26-35 | 19-28-38 | 20-30-40 | 22-32-43 |
|            | Sidewall                   | 4-9-14   | 8-13-18  | 11-16-21 | 13-18-23 | 15-20-25 | 16-21-26 | 17-22-28 |
| 6 1/2 in.  | Flow Rate (cfm/ft)         | 67       | 100      | 133      | 167      | 200      | 234      | 267      |
|            | Sound (NC)                 | -        | 23       | 31       | 36       | 41       | 45       | 49       |
|            | Throw (ft.)                |          |          |          |          |          |          |          |
|            | Ceiling                    | 9-16-23  | 13-21-29 | 16-25-34 | 18-28-38 | 20-30-40 | 22-33-44 | 24-35-46 |
|            | Sidewall                   | 5-10-16  | 9-14-20  | 13-17-22 | 15-20-25 | 16-21-26 | 17-22-28 | 18-23-29 |
| 8 in.      | Flow Rate (cfm/ft)         | 90       | 135      | 180      | 225      | 265      | 315      | 355      |
|            | Sound (NC)                 | -        | 24       | 32       | 37       | 42       | 46       | 50       |
|            | Throw (ft.)                |          |          |          |          |          |          |          |
|            | Ceiling                    | 12-18-25 | 16-24-32 | 20-29-38 | 21-31-42 | 23-34-47 | 27-39-52 | 27-39-54 |
|            | Sidewall                   | 6-11-19  | 10-15-23 | 14-18-25 | 17-21-28 | 17-22-29 | 18-23-31 | 19-24-32 |
| 9 1/2 in.  | Flow Rate (cfm/ft)         | 115      | 170      | 230      | 290      | 350      | 410      | 460      |
|            | Sound (NC)                 | -        | 25       | 33       | 38       | 43       | 47       | 51       |
|            | Throw (ft.)                |          |          |          |          |          |          |          |
|            | Ceiling                    | 16-21-29 | 16-25-34 | 21-30-40 | 22-33-44 | 25-36-49 | 27-39-54 | 28-40-56 |
|            | Sidewall                   | 7-12-19  | 11-16-23 | 15-19-25 | 18-22-29 | 18-23-30 | 19-24-32 | 20-25-33 |
| 11 3/4 in. | Flow Rate (cfm/ft)         | 160      | 235      | 315      | 400      | 470      | 550      | 690      |
|            | Sound (NC)                 | 16       | 27       | 35       | 40       | 45       | 49       | 53       |
|            | Throw (ft.)                |          |          |          |          |          |          |          |
|            | Ceiling                    | 16-25-31 | 20-30-36 | 23-34-41 | 26-38-45 | 29-43-50 | 31-46-54 | 35-50-56 |
|            | Sidewall                   | 8-13-21  | 12-17-25 | 16-20-27 | 19-23-31 | 19-24-32 | 20-25-34 | 21-26-35 |

### Performance Notes

Tested in accordance with ASHRAE Standard 70 – 2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."

- Pressure  
Airflow is in cubic feet per minute [cfm].
- Throw data is given in feet [ft] to terminal velocities of 150 fpm (minimum), 100 fpm (middle), 50 fpm (maximum).  
These throw values are based on a 4 ft active section of vane with a cooling temperature differential of 20°F. The multiplier factors listed in the table below are applicable for other lengths.

### Throw Correction for Length (Multiply)

| Active Length       | Terminal Velocity |         |        |
|---------------------|-------------------|---------|--------|
|                     | 150 fpm           | 100 fpm | 50 fpm |
| 1 ft                | 0.5               | 0.6     | 0.7    |
| 10 ft or Continuous | 1.6               | 1.4     | 1.2    |

- Sound  
NC, sound pressure levels, are based on a room absorption of 10 dB re 10-12 Watts and a 10 ft active section. The NC correction values for other lengths are listed in the table below.

### NC Correction for Length

| Active Length, ft | 1   | 2  | 4  | 6  | 8  | 10 | 15 | 20 | 25 | 30 |
|-------------------|-----|----|----|----|----|----|----|----|----|----|
| Correction        | -10 | -7 | -4 | -2 | -1 | 0  | +2 | +3 | +4 | +5 |

- Return Air Applications  
When used as a return air intake, the NC value given in the performance table will be increased by 4.  
For return air application, the negative static pressure will be 0.8 times the static pressure value as shown in the performance table.
- Blanks "-" indicate an NC level below 15.

# PERFORMANCE DATA

## Linear Vane Diffuser – 2-Way Deflection

| Size       | Static Pressure     | 0.010   | 0.022    | 0.040    | 0.063    | 0.089    | 0.121    | 0.159    |
|------------|---------------------|---------|----------|----------|----------|----------|----------|----------|
| 6 1/4 in.  | Flow Rate (cfm/ft)  | 41      | 62       | 82       | 103      | 124      | 144      | 165      |
|            | Sound (NC)          | -       | 21       | 29       | 34       | 39       | 43       | 47       |
|            | Throw (ft.) Ceiling | 5-9-14  | 8-13-18  | 10-15-21 | 12-18-24 | 13-20-27 | 14-21-28 | 16-23-31 |
| 7 3/4 in.  | Flow Rate (cfm/ft)  | 62      | 94       | 125      | 156      | 187      | 218      | 250      |
|            | Sound (NC)          | -       | 23       | 31       | 36       | 41       | 45       | 49       |
|            | Throw (ft.) Ceiling | 5-10-16 | 8-14-21  | 10-17-25 | 12-20-28 | 14-22-31 | 15-24-34 | 17-26-36 |
| 9 1/4 in.  | Flow Rate (cfm/ft)  | 84      | 126      | 168      | 210      | 252      | 294      | 336      |
|            | Sound (NC)          | -       | 24       | 32       | 37       | 42       | 46       | 50       |
|            | Throw (ft.) Ceiling | 6-12-18 | 9-16-24  | 12-19-27 | 15-23-31 | 17-25-34 | 18-28-38 | 19-29-40 |
| 10 3/4 in. | Flow Rate (cfm/ft)  | 107     | 160      | 214      | 267      | 320      | 374      | 427      |
|            | Sound (NC)          | -       | 25       | 33       | 38       | 43       | 47       | 51       |
|            | Throw (ft.) Ceiling | 6-13-20 | 11-18-25 | 14-22-30 | 17-25-33 | 18-27-37 | 20-30-41 | 21-32-44 |
| 12 1/4 in. | Flow Rate (cfm/ft)  | 131     | 197      | 262      | 328      | 394      | 459      | 525      |
|            | Sound (NC)          | -       | 26       | 34       | 39       | 44       | 48       | 52       |
|            | Throw (ft.) Ceiling | 7-14-22 | 12-19-27 | 15-23-32 | 18-27-36 | 19-29-40 | 20-31-43 | 21-33-46 |

### Performance Notes

Tested in accordance with ASHRAE Standard 70 – 2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."

1. Pressure

Airflow is in cubic feet per minute [cfm].

2. Throw data is given in feet [ft] to terminal velocities of 150 fpm (minimum), 100 fpm (middle), 50 fpm (maximum).

These throw values are based on a 4 ft active section of vane with a cooling temperature differential of 20°F. The multiplier factors listed in the table below are applicable for other lengths.

### Throw Correction for Length (Multiply)

| Active Length       | Terminal Velocity |         |        |
|---------------------|-------------------|---------|--------|
|                     | 150 fpm           | 100 fpm | 50 fpm |
| 1 ft                | 0.5               | 0.6     | 0.7    |
| 10 ft or Continuous | 1.6               | 1.4     | 1.2    |

3. Sound

NC, sound pressure levels, are based on a room absorption of 10 dB re 10-12 Watts and a 10 ft active section. The NC correction values for other lengths are listed in the table below.

### NC Correction for Length

| Active Length, ft | 1   | 2  | 4  | 6  | 8  | 10 | 15 | 20 | 25 | 30 |
|-------------------|-----|----|----|----|----|----|----|----|----|----|
| Correction        | -10 | -7 | -4 | -2 | -1 | 0  | +2 | +3 | +4 | +5 |

4. Return Air Applications

When used as a return air intake, the NC value given in the performance table will be increased by 4.

For return air application, the negative static pressure will be 0.8 times the static pressure value as shown in the performance table.

5. Blanks "-" indicate an NC level below 15.