



## Insertion Loss (IL)

+ : "forward flow" where noise & airflow move in same direction (e.g. supply side)  
 - : "reverse flow" where noise & airflow move in opposite directions (e.g. return side)

| A<br>(in.) | Centerbody<br>Diameter*<br>(in.) | D<br>(in.) | Fan Inlet/Outlet<br>Velocity<br>(ft. per min.) | OCTAVE BAND - Hz/D.I.L. (dB) |     |     |     |      |      |      |      |
|------------|----------------------------------|------------|--|------------------------------|-----|-----|-----|------|------|------|------|
|            |                                  |            |  | 63                           | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 25         | 0                                | 25         | - 2000   | 1                            | 4   | 8   | 13  | 9    | 7    | 6    | 4    |
|            |                                  |            | 0  | 1                            | 4   | 8   | 12  | 8    | 7    | 6    | 4    |
|            |                                  |            | + 2000   | 1                            | 4   | 7   | 12  | 9    | 7    | 6    | 4    |
| 25         | 0                                | 50         | - 2000   | 1                            | 7   | 11  | 21  | 18   | 11   | 9    | 9    |
|            |                                  |            | 0  | 1                            | 7   | 10  | 20  | 17   | 10   | 9    | 8    |
|            |                                  |            | + 2000   | 1                            | 7   | 9   | 20  | 17   | 11   | 10   | 8    |
| 25         | 8                                | 25         | - 2000   | 1                            | 5   | 9   | 14  | 15   | 11   | 9    | 7    |
|            |                                  |            | 0  | 1                            | 4   | 8   | 13  | 14   | 11   | 9    | 7    |
|            |                                  |            | + 2000   | 1                            | 4   | 7   | 12  | 13   | 11   | 9    | 7    |
| 25         | 8                                | 50         | - 2000   | 1                            | 8   | 11  | 22  | 21   | 16   | 13   | 11   |
|            |                                  |            | 0  | 1                            | 8   | 10  | 21  | 20   | 15   | 13   | 11   |
|            |                                  |            | + 2000   | 1                            | 8   | 10  | 21  | 20   | 15   | 13   | 11   |
| 25         | 12                               | 25         | - 2000   | 1                            | 5   | 10  | 17  | 19   | 14   | 11   | 9    |
|            |                                  |            | 0  | 1                            | 4   | 9   | 16  | 18   | 14   | 11   | 9    |
|            |                                  |            | + 2000   | 1                            | 4   | 9   | 15  | 17   | 14   | 11   | 9    |
| 25         | 12                               | 50         | - 2000   | 1                            | 10  | 14  | 24  | 26   | 19   | 16   | 12   |
|            |                                  |            | 0  | 1                            | 9   | 13  | 23  | 25   | 18   | 16   | 12   |
|            |                                  |            | + 2000   | 1                            | 9   | 13  | 23  | 25   | 18   | 17   | 13   |
| 25         | 16                               | 25         | - 2000   | 1                            | 6   | 12  | 20  | 22   | 20   | 14   | 12   |
|            |                                  |            | 0  | 1                            | 5   | 11  | 19  | 22   | 20   | 14   | 12   |
|            |                                  |            | + 2000   | 1                            | 5   | 10  | 18  | 21   | 20   | 15   | 11   |
| 25         | 16                               | 50         | - 2000   | 1                            | 11  | 15  | 27  | 33   | 25   | 19   | 16   |
|            |                                  |            | 0  | 1                            | 10  | 14  | 26  | 32   | 25   | 19   | 16   |
|            |                                  |            | + 2000   | 1                            | 10  | 14  | 26  | 32   | 25   | 20   | 17   |

\*Note: The centerbody diameter should be matched to the fan hub diameter for an inlet silencer or the fan motor diameter for a discharge silencer.

## Pressure Drop (PD)

| A<br>(in.) | B<br>(in.) | C<br>(in.) | Centerbody<br>Diameter.<br>(in.) | D<br>(in.) | Weight | Pressure Drop based on Fan Inlet/Outlet Velocity = 2000 FPM* |      |            |      |
|------------|------------|------------|----------------------------------|------------|--------|--|------|------------|------|
|            |            |            |                                  |            |        | Silencer On:   |      |            |      |
|            |            |            |                                  |            |        | Fan Inlet  |      | Fan Outlet |      |
| Ducted     |            | Unducted   |                                  | Ducted     |        | Unducted   |      |            |      |
| 25         | 32         | 37         | 0                                | 25         | 160    | 0.04   | 0.06 | 0.11       | 0.21 |
| 25         | 32         | 37         | 0                                | 50         | 250    | 0.04   | 0.07 | 0.10       | 0.20 |
| 25         | 32         | 37         | 8                                | 25         | 205    | 0.04   | 0.07 | 0.10       | 0.22 |
| 25         | 32         | 37         | 8                                | 50         | 305    | 0.05   | 0.08 | 0.09       | 0.21 |
| 25         | 32         | 37         | 12                               | 25         | 220    | 0.04   | 0.06 | 0.08       | 0.22 |
| 25         | 32         | 37         | 12                               | 50         | 330    | 0.04   | 0.07 | 0.07       | 0.21 |
| 25         | 32         | 37         | 16                               | 25         | 240    | 0.06   | 0.10 | 0.25       | 0.43 |
| 25         | 32         | 37         | 16                               | 50         | 255    | 0.07   | 0.11 | 0.23       | 0.41 |

\*Note: For Pressure Drops at other velocities:

$$\text{Actual PD} = \left( \frac{\text{Actual velocity}}{2000 \text{ FPM}} \right)^2 \times \text{PD from chart}$$