

Sound Attenuator

No. 802-04



Commercial Acoustics
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A DIVISION OF METAL FORM MANUFACTURING

CERTIFIED ENGINEERING DATA SHEET

MODEL 12CNF-LP

CIRCULAR NO-FILL LOW PRESSURE LOSS

NOMENCLATURE EXAMPLE:

| INLET | LENGTH | MODEL |
|-------|--------|----------|
| 12 | 36 | 12CNF-LP |

Commercial Acoustics sound attenuators are engineered to achieve a maximum insertion loss and a minimum pressure drop. Commercial Acoustics sound attenuators feature airfoil design for efficient aerodynamic performance, as well as superior acoustical materials and total galvanized steel construction guaranteeing excellent reliability and performance. DIL is achieved by use of tuned resonators. No acoustical fill is used.

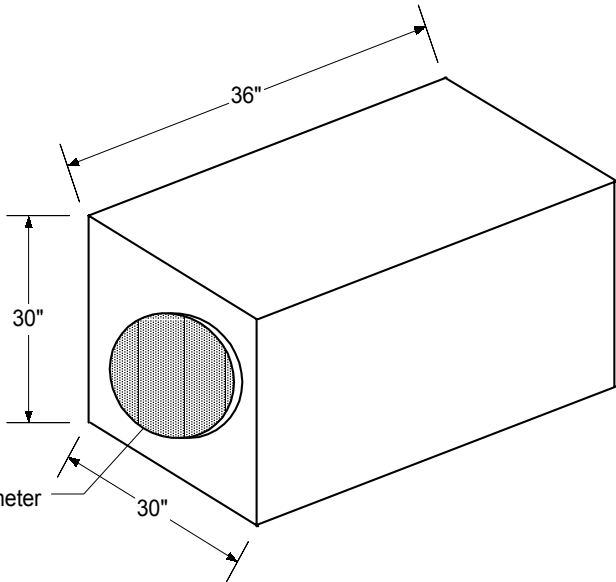


TABLE I

| OCTAVE BAND | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|-----------------------------|------------------------------------|-----|-----|-----|------|------|------|------|
| CENTER FREQUENCY, Hz | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| SILENCER FACE VELOCITY, fpm | DYNAMIC INSERTION LOSS IN DECIBELS | | | | | | | |
| -2000 | 4 | 13 | 22 | 9 | 8 | 8 | 7 | 4 |
| -1000 | 5 | 13 | 20 | 9 | 8 | 7 | 6 | 5 |
| 0 | 4 | 11 | 19 | 8 | 8 | 8 | 6 | 5 |
| +1000 | 4 | 12 | 18 | 9 | 8 | 8 | 6 | 5 |
| +2000 | 4 | 12 | 20 | 9 | 8 | 8 | 6 | 5 |

TABLE II

| OCTAVE BAND | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|-----------------------------|---|-----|-----|-----|------|------|------|------|
| CENTER FREQUENCY, Hz | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| SILENCER FACE VELOCITY, fpm | SELF-NOISE SOUND POWER LEVELS, dB re: 10 ⁻¹² WATTS | | | | | | | |
| -2000 | 65* | 57 | 50 | 46 | 48 | 44 | 40 | 29* |
| -1000 | 64* | 51* | 37 | 27 | 23 | 21* | 25* | 31* |
| +1000 | 63* | 48* | 35* | 25 | 20* | 20* | 26* | 30* |
| +2000 | 64 | 54 | 45 | 41 | 44 | 39 | 30 | 31* |

* Denotes data that has reached ambient levels in the test room or is determined by instrument limitations. Actual levels are less than or equal to the level shown.

Static Pressure Loss, Model **12CNF-LP** = 0.014 in.wc. @ 1000 fpm face velocity

Actual fpm = Actual CFM ÷ 0.785 square feet.

For intermediate velocities: $\left(\frac{\text{Actual Velocity}}{1000}\right)^2 \times 0.014 \text{ in. wc.} = \text{Actual Pressure Loss}$

THESE TABLES CONTAIN BOTH FORWARD(+) AND REVERSE(-) FLOW ACOUSTIC AND AERODYNAMIC RATINGS WHICH ARE THE TEST RESULTS FROM AN INDEPENDENT NVLAP CERTIFIED LABORATORY MEASURED IN ACCORDANCE WITH ASTM E477-99. COPIES OF THESE TEST REPORTS CAN BE FURNISHED UPON REQUEST.