

| Neck Size, $\phi$ | Nom Duct Area, ft <sup>2</sup> | Neck Velocity<br>Velocity Press | 400        | 500        | 600        | 800         | 1000        | 1200         | 1400         | 1600         | 1800         | 2000         |
|-------------------|--------------------------------|---------------------------------|------------|------------|------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
|                   |                                |                                 | 6          | 0.196      | CFM        | 80          | 100         | 120          | 160          | 200          | 240          | 270          |
| Ps                | 0.01                           | 0.02                            |            |            | 0.03       | 0.05        | 0.08        | 0.12         | 0.15         | 0.20         | 0.25         | 0.31         |
| NC                | <20                            | <20                             |            |            | <20        | 20          | 27          | 33           | 37           | 41           | 45           | 48           |
| Throw             | 1   1   3                      | 1   2   3                       |            |            | 1   2   4  | 2   3   5   | 2   3   7   | 3   4   8    | 3   4   9    | 3   5   10   | 4   6   12   | 4   6   13   |
| 8                 | 0.349                          | CFM                             | 140        | 170        | 210        | 280         | 350         | 420          | 490          | 560          | 630          | 700          |
|                   |                                | Ps                              | 0.01       | 0.02       | 0.03       | 0.06        | 0.09        | 0.13         | 0.18         | 0.24         | 0.30         | 0.37         |
|                   |                                | NC                              | <20        | <20        | <20        | 22          | 29          | 35           | 40           | 44           | 48           | 51           |
|                   |                                | Throw                           | 1   2   4  | 1   2   4  | 2   3   5  | 2   4   7   | 3   4   9   | 4   5   11   | 4   6   12   | 5   7   14   | 5   8   16   | 6   9   18   |
| 10                | 0.545                          | CFM                             | 220        | 270        | 330        | 440         | 550         | 650          | 760          | 870          | 980          | 1090         |
|                   |                                | Ps                              | 0.02       | 0.02       | 0.04       | 0.07        | 0.10        | 0.14         | 0.19         | 0.25         | 0.32         | 0.40         |
|                   |                                | NC                              | <20        | <20        | <20        | 23          | 30          | 35           | 40           | 45           | 48           | 52           |
|                   |                                | Throw                           | 1   2   4  | 2   3   5  | 2   3   6  | 3   4   8   | 3   5   10  | 4   6   12   | 5   7   14   | 6   8   17   | 6   9   19   | 7   10   21  |
| 12                | 0.785                          | CFM                             | 310        | 390        | 470        | 630         | 790         | 940          | 1100         | 1260         | 1410         | 1570         |
|                   |                                | Ps                              | 0.02       | 0.03       | 0.04       | 0.07        | 0.11        | 0.16         | 0.22         | 0.28         | 0.35         | 0.44         |
|                   |                                | NC                              | <20        | <20        | <20        | 25          | 33          | 38           | 43           | 47           | 51           | 54           |
|                   |                                | Throw                           | 1   3   5  | 2   3   6  | 3   4   8  | 3   5   10  | 4   6   13  | 5   8   15   | 6   9   18   | 7   10   21  | 8   12   23  | 9   13   26  |
| 15                | 1.227                          | CFM                             | 490        | 610        | 740        | 980         | 1230        | 1470         | 1720         | 1960         | 2210         | 2450         |
|                   |                                | Ps                              | 0.01       | 0.02       | 0.03       | 0.05        | 0.08        | 0.11         | 0.15         | 0.20         | 0.25         | 0.31         |
|                   |                                | NC                              | <20        | <20        | <20        | 27          | 35          | 40           | 45           | 49           | 53           | 56           |
|                   |                                | Throw                           | 1   3   6  | 2   4   8  | 3   5   9  | 4   6   12  | 5   8   15  | 6   9   18   | 7   11   21  | 8   12   24  | 9   14   27  | 10   15   30 |
| 18                | 1.767                          | CFM                             | 710        | 880        | 1060       | 1410        | 1770        | 2120         | 2470         | 2830         | 3180         | 3530         |
|                   |                                | Ps                              | 0.01       | 0.02       | 0.03       | 0.05        | 0.08        | 0.11         | 0.15         | 0.20         | 0.25         | 0.31         |
|                   |                                | NC                              | <20        | <20        | 20         | 29          | 36          | 42           | 47           | 51           | 55           | 58           |
|                   |                                | Throw                           | 2   4   8  | 3   5   10 | 4   6   12 | 5   8   16  | 7   10   20 | 8   12   24  | 9   14   28  | 11   16   32 | 12   18   36 | 13   20   40 |
| 21                | 2.405                          | CFM                             | 960        | 1200       | 1440       | 1920        | 2400        | 2890         | 3370         | 3850         | 4330         | 4810         |
|                   |                                | Ps                              | 0.02       | 0.03       | 0.04       | 0.07        | 0.11        | 0.16         | 0.22         | 0.28         | 0.36         | 0.44         |
|                   |                                | NC                              | <20        | <20        | 21         | 30          | 37          | 43           | 48           | 52           | 55           | 59           |
|                   |                                | Throw                           | 3   5   10 | 4   6   13 | 5   8   15 | 7   10   21 | 9   13   26 | 10   16   31 | 12   18   36 | 14   21   41 | 16   23   47 | 17   26   52 |
| 24                | 3.141                          | CFM                             | 1260       | 1570       | 1880       | 2510        | 3140        | 3770         | 4400         | 5030         | 5650         | 6280         |
|                   |                                | Ps                              | 0.01       | 0.02       | 0.03       | 0.06        | 0.09        | 0.13         | 0.18         | 0.24         | 0.30         | 0.37         |
|                   |                                | NC                              | <20        | <20        | 21         | 31          | 38          | 44           | 48           | 53           | 56           | 60           |
|                   |                                | Throw                           | 3   5   10 | 4   6   13 | 5   8   15 | 7   10   21 | 9   13   26 | 10   15   31 | 12   18   36 | 14   21   41 | 15   23   46 | 17   26   52 |

**Notes:**

- Neck velocity is fpm, feet per minute.

**Test Standard**

- ANSI / ASHRAE standard 70
- Isothermal conditions
- Non-uniform air flow into diffusers increase sound levels, operating pressures, and can distort the air distribution pattern into the space

**Sound Levels**

- NC is noise criteria curve that will not be exceeded at the operating point. This is determined by assuming a 10dB (ref: 10<sup>-12</sup> watts) room attenuation that is subtracted from the power levels in each of the 2nd thru 7th octave bands

**Throw**

- The numbers shown are throw distances, in feet, measured along the jet trajectory axis relating to terminal velocities of 150,100,& 50 fpm and include a surface effect.
- Terminal velocity is the air speed, in feet per minute, measured in the supply air stream.
- For exposed duct installations, throws are 70% of the table values above.

**Pressure**

- P<sub>s</sub> represents static pressure, inches of water
- P<sub>t</sub> total pressure can be calculated by adding the Velocity pressure and Static pressure (P<sub>s</sub>), inches of water
- All pressures are stated and calculated in inches of water.