

OMNI / OMNI-AA - ARCHITECTURAL CEILING / SQUARE PLAQUE

|                       |                           | Neck Velocity             | 400    | 500     | 600     | 700      | 800      | 900      | 1000     | 1200     | 1400     |
|-----------------------|---------------------------|---------------------------|--------|---------|---------|----------|----------|----------|----------|----------|----------|
|                       |                           | Velocity Pressure         | 0.010  | 0.016   | 0.022   | 0.031    | 0.040    | 0.051    | 0.062    | 0.090    | 0.122    |
| 12" x 12" Module Size | 4" Round Neck             | Airflow, cfm              | 35     | 44      | 52      | 61       | 70       | 79       | 87       | 105      | 122      |
|                       |                           | Total Pressure, Inches WG | 0.034  | 0.053   | 0.076   | 0.103    | 0.134    | 0.170    | 0.210    | 0.303    | 0.412    |
|                       |                           | Throw Feet                | 1-2-3  | 1-2-4   | 2-2-5   | 2-3-6    | 2-3-6    | 2-4-7    | 3-4-8    | 3-5-10   | 4-6-11   |
|                       |                           | NC (Noise Criteria)       | -      | -       | 12      | 17       | 21       | 24       | 27       | 33       | 38       |
|                       | 5" Round Neck             | Airflow, cfm              | 55     | 68      | 82      | 95       | 109      | 123      | 136      | 164      | 191      |
|                       |                           | Total Pressure, Inches WG | 0.040  | 0.063   | 0.091   | 0.124    | 0.161    | 0.204    | 0.252    | 0.363    | 0.494    |
|                       |                           | Throw Feet                | 2-2-5  | 2-3-6   | 2-3-7   | 3-4-8    | 3-5-9    | 3-5-10   | 4-6-12   | 5-7-14   | 5-8-15   |
|                       |                           | NC (Noise Criteria)       | -      | -       | 12      | 17       | 21       | 24       | 28       | 33       | 38       |
|                       | 6" Round Neck             | Airflow, cfm              | 78     | 98      | 118     | 137      | 157      | 176      | 196      | 235      | 274      |
|                       |                           | Total Pressure, Inches WG | 0.049  | 0.076   | 0.109   | 0.149    | 0.194    | 0.246    | 0.303    | 0.437    | 0.594    |
|                       |                           | Throw Feet                | 2-3-6  | 3-4-8   | 3-5-9   | 4-5-11   | 4-6-12   | 5-7-14   | 5-8-15   | 6-9-17   | 7-11-18  |
|                       |                           | NC (Noise Criteria)       | -      | -       | 12      | 17       | 21       | 24       | 28       | 33       | 38       |
| 7" Round Neck         | Airflow, cfm              | 107                       | 134    | 160     | 187     | 214      | 240      | 267      | 320      | 374      |          |
|                       | Total Pressure, Inches WG | 0.058                     | 0.091  | 0.131   | 0.178   | 0.233    | 0.295    | 0.364    | 0.524    | 0.714    |          |
|                       | Throw Feet                | 3-4-8                     | 3-5-9  | 4-6-11  | 4-7-13  | 5-8-15   | 6-9-17   | 6-9-18   | 8-11-20  | 9-13-21  |          |
|                       | NC (Noise Criteria)       | -                         | -      | 12      | 17      | 21       | 24       | 28       | 33       | 38       |          |
| 8" Round Neck         | Airflow, cfm              | 140                       | 175    | 209     | 244     | 279      | 314      | 349      | 419      | 489      |          |
|                       | Total Pressure, Inches WG | 0.070                     | 0.109  | 0.156   | 0.213   | 0.278    | 0.352    | 0.434    | 0.626    | 0.852    |          |
|                       | Throw Feet                | 3-5-9                     | 4-6-11 | 5-7-14  | 5-8-16  | 6-9-18   | 7-10-19  | 8-11-20  | 9-14-22  | 11-16-24 |          |
|                       | NC (Noise Criteria)       | -                         | -      | 12      | 17      | 21       | 24       | 28       | 33       | 38       |          |
| 20" x 20" Module Size | 6" Dia.                   | Airflow, cfm              | 78     | 98      | 118     | 137      | 157      | 173      | 196      | 235      | 274      |
|                       |                           | Total Pressure            | 0.016  | 0.025   | 0.036   | 0.049    | 0.063    | .080     | 0.100    | 0.142    | 0.193    |
|                       |                           | NC (Noise Criteria)       | -      | -       | -       | 16       | 20       | 24       | 28       | 34       | 39       |
|                       |                           | Throw feet                | 1-1-3  | 1-1-4   | 1-2-4   | 1-3-5    | 1-3-6    | 2-3-6    | 2-4-7    | 3-5-8    | 3-5-8    |
|                       | 8" Dia.                   | Airflow, cfm              | 140    | 175     | 209     | 244      | 279      | 314      | 349      | 419      | 489      |
|                       |                           | Total Pressure            | 0.019  | 0.030   | 0.043   | 0.058    | 0.075    | .096     | 0.118    | 0.169    | 0.229    |
|                       |                           | NC (Noise Criteria)       | -      | -       | -       | 18       | 22       | 26       | 30       | 36       | 41       |
|                       |                           | Throw feet                | 1-2-4  | 2-3-6   | 2-4-6   | 3-4-7    | 3-5-7    | 3-5-8    | 4-6-8    | 5-6-9    | 5-7-10   |
|                       | 10" Dia.                  | Airflow, cfm              | 218    | 273     | 327     | 382      | 436      | 491      | 545      | 654      | 763      |
|                       |                           | Total Pressure            | 0.024  | 0.038   | 0.055   | 0.074    | 0.096    | .123     | 0.151    | 0.215    | 0.292    |
|                       |                           | NC (Noise Criteria)       | -      | -       | -       | 18       | 23       | 27       | 31       | 37       | 42       |
|                       |                           | Throw feet                | 3-4-6  | 3-4-7   | 4-5-8   | 4-6-8    | 5-6-9    | 5-7-9    | 6-7-10   | 6-8-11   | 7-9-12   |
| 24" x 24" Module Size | 6" Round Neck             | Airflow, cfm              | 78     | 98      | 118     | 137      | 157      | 176      | 196      | 235      | 274      |
|                       |                           | Total Pressure, Inches WG | 0.011  | 0.017   | 0.025   | 0.034    | 0.044    | 0.056    | 0.069    | 0.099    | 0.135    |
|                       |                           | Throw Feet                | 1-1-4  | 1-2-4   | 1-3-5   | 2-3-6    | 2-4-7    | 3-4-8    | 3-4-9    | 4-5-11   | 4-6-11   |
|                       |                           | NC (Noise Criteria)       | -      | -       | -       | -        | 13       | 17       | 21       | 28       | 34       |
|                       | 8" Round Neck             | Airflow, cfm              | 140    | 175     | 209     | 244      | 279      | 314      | 349      | 419      | 489      |
|                       |                           | Total Pressure, Inches WG | 0.018  | 0.028   | 0.040   | 0.055    | 0.072    | 0.091    | 0.112    | 0.162    | 0.220    |
|                       |                           | Throw Feet                | 2-3-6  | 2-4-7   | 3-4-9   | 3-5-10   | 4-6-12   | 4-6-12   | 5-7-13   | 6-9-14   | 7-10-15  |
|                       |                           | NC (Noise Criteria)       | -      | -       | -       | 12       | 17       | 21       | 25       | 32       | 38       |
|                       | 10" Round Neck            | Airflow, cfm              | 218    | 273     | 327     | 382      | 436      | 491      | 545      | 654      | 763      |
|                       |                           | Total Pressure, Inches WG | 0.027  | 0.042   | 0.060   | 0.082    | 0.107    | 0.136    | 0.168    | 0.241    | 0.329    |
|                       |                           | Throw Feet                | 3-4-8  | 3-5-10  | 4-6-12  | 5-7-13   | 5-8-14   | 6-9-15   | 7-10-16  | 8-12-18  | 10-13-19 |
|                       |                           | NC (Noise Criteria)       | -      | -       | -       | 15       | 20       | 24       | 28       | 35       | 41       |
| 12" Round Neck        | Airflow, cfm              | 314                       | 393    | 471     | 550     | 628      | 707      | 785      | 942      | 1099     |          |
|                       | Total Pressure, Inches WG | 0.038                     | 0.059  | 0.085   | 0.115   | 0.151    | 0.191    | 0.235    | 0.339    | 0.461    |          |
|                       | Throw Feet                | 4-5-11                    | 5-7-14 | 5-8-15  | 6-9-16  | 7-11-17  | 8-12-18  | 9-14-19  | 11-15-21 | 13-16-23 |          |
|                       | NC (Noise Criteria)       | -                         | -      | 12      | 18      | 23       | 27       | 31       | 38       | 43       |          |
| 14" Round Neck        | Airflow, cfm              | 428                       | 535    | 641     | 748     | 855      | 962      | 1069     | 1283     | 1497     |          |
|                       | Total Pressure, Inches WG | 0.051                     | 0.079  | 0.114   | 0.155   | 0.202    | 0.256    | 0.316    | 0.455    | 0.619    |          |
|                       | Throw Feet                | 4-7-13                    | 6-8-16 | 7-10-17 | 8-12-19 | 9-13-20  | 10-15-21 | 11-16-23 | 13-17-25 | 15-19-27 |          |
|                       | NC (Noise Criteria)       | -                         | -      | 14      | 20      | 25       | 29       | 33       | 40       | 45       |          |
| 15" Round Neck        | Airflow, cfm              | 491                       | 614    | 736     | 859     | 982      | 1104     | 1227     | 1472     | 1718     |          |
|                       | Total Pressure, Inches WG | 0.058                     | 0.090  | 0.130   | 0.177   | 0.231    | 0.292    | 0.360    | 0.519    | 0.706    |          |
|                       | Throw Feet                | 5-7-15                    | 6-9-17 | 7-11-19 | 9-13-20 | 10-15-22 | 11-16-23 | 12-17-24 | 15-19-26 | 17-20-29 |          |
|                       | NC (Noise Criteria)       | -                         | -      | 15      | 21      | 26       | 30       | 34       | 41       | 46       |          |



- Data obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70-2006. Actual performance, with flexible duct inlet, may vary in the field. See the Engineering Guidelines section of this catalog for additional information.
- If the diffuser is mounted on an exposed duct, the throw values are 70% of those listed in the table
- Throw values are given for terminal velocities of 150, 100 and 50 fpm and for isothermal conditions. See the section, Engineering Guidelines for catalog throw data information.
- NC values based on octave band 2 to 7 sound power levels minus a room absorption of 10 dB
- Dash (-) in space denotes an NC value of less than 10
- Each NC value represents the noise criteria curve which will not be exceeded by the sound pressure in any of the octave bands, 2 through 7, with a room absorption of 10 dB, re 10<sup>-12</sup> watts.
- All pressures are given in inches of water
- To obtain static pressure, subtract the velocity pressure from the total pressure

