

DIFFUSERS

F Diffusers | Architectural, Square Plaque | Performance Data

Performance Data

OMNI, OMNI-AA • Architectural Ceiling • Square Plaque

F122

PERFORMANCE DATA

| | | 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"x12" 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 | |
| 24"x24" 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 10⁻¹² watts.
- All pressures are given in inches of water.
- To obtain static pressure, subtract the velocity pressure from the total pressure.

