

Design #8



| Core Area Sq. Feet | Nominal Duct Size in Inches | Core Velocity | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |
|-----------------------|-----------------------------------|--------------------|-------|--------|---------|----------|----------|----------|----------|----------|-----------|----------|
| | | Velocity Pressure | 0.001 | 0.002 | 0.006 | 0.01 | 0.016 | 0.022 | 0.031 | 0.04 | 0.051 | 0.062 |
| | | TP: Total Pressure | 0.003 | 0.014 | 0.031 | 0.056 | 0.09 | 0.131 | 0.175 | 0.225 | 0.29 | 0.355 |
| 0.2 | 10x4 6x6 | CFM | 19 | 38 | 56 | 75 | 94 | 113 | 132 | 150 | 169 | 188 |
| | | NC | | | | 17 | 23 | 28 | 32 | 35 | 38 | 42 |
| | | 4-Way, 45° Fixed | | | 4-6-9 | 5-8-13 | 6-9-15 | 8-11-18 | 9-13-21 | 10-14-20 | 11-16-23 | 12-17-25 |
| | | 2-Way, 45° Fixed | | | 5-7-11 | 6-9-15 | 8-11-18 | 9-14-22 | 10-15-21 | 12-17-25 | 13-20-32 | 15-22-35 |
| | | 1-Way, Straight | | | 6-9-14 | 8-11-18 | 9-14-22 | 11-15-22 | 12-18-26 | 14-21-34 | 16-24-38 | 16-26-42 |
| 0.26 | 12x4 8x6 | CFM | 24 | 47 | 75 | 99 | 122 | 146 | 169 | 197 | 221 | 244 |
| | | NC | | | 10 | 18 | 24 | 29 | 33 | 36 | 40 | 43 |
| | | 4-Way, 45° Fixed | | 3-4-7 | 4-5-6 | 6-9-14 | 7-10-16 | 8-12-20 | 10-13-19 | 11-15-22 | 12-17-25 | 13-20-32 |
| | | 2-Way, 45° Fixed | | 3-5-8 | 5-6-8 | 7-9-12 | 8-12-20 | 10-14-20 | 11-16-23 | 13-19-31 | 14-21-34 | 16-24-38 |
| | | 1-Way, Straight | | 4-5-6 | 6-8-11 | 8-11-15 | 10-14-20 | 12-17-24 | 13-20-32 | 15-23-37 | 17-26-41 | 19-28-45 |
| 0.3 | 14x4 | CFM | 28 | 56 | 85 | 113 | 141 | 169 | 197 | 226 | 254 | 282 |
| | | NC | | | 10 | 19 | 24 | 29 | 33 | 37 | 41 | 44 |
| | | 4-Way, 45° Fixed | | 3-4-7 | 4-5-6 | 6-8-10 | 7-10-13 | 9-12-17 | 10-14-20 | 11-16-23 | 12-18-26 | 14-21-33 |
| | | 2-Way, 45° Fixed | | 3-5-8 | 5-7-9 | 7-10-13 | 9-12-17 | 10-14-20 | 12-17-24 | 13-20-32 | 16-24-38/ | 16-24-39 |
| | | 1-Way, Straight | | 4-5-6 | 6-8-11 | 8-11-16 | 10-15-21 | 12-17-25 | 14-21-34 | 16-24-38 | 18-27-43 | 20-29-47 |
| 0.35 | 16x4 12x5 10x6 8x8 | CFM | 33 | 66 | 99 | 132 | 165 | 197 | 230 | 263 | 296 | 329 |
| | | NC | | | 11 | 19 | 25 | 30 | 34 | 38 | 41 | 44 |
| | | 4-Way, 45° Fixed | | 3-4-7 | 5-7-11 | 6-9-15 | 8-11-18 | 9-13-21 | 10-15-21 | 12-17-24 | 13-19-31 | 14-21-34 |
| | | 2-Way, 45° Fixed | | 4-6-9 | 5-8-13 | 7-10-13 | 9-13-21 | 10-15-21 | 12-17-25 | 14-21-33 | 15-23-37 | 17-26-41 |
| | | 1-Way, Straight | | 4-5-6 | 7-9-12 | 9-12-17 | 10-15-21 | 12-18-26 | 15-22-35 | 17-25-40 | 18-27-44 | 20-31-49 |
| 0.4 | 18x4 12x6 | CFM | 38 | 75 | 113 | 150 | 188 | 226 | 263 | 301 | 338 | 376 |
| | | NC | | | 12 | 20 | 26 | 31 | 35 | 38 | 42 | 45 |
| | | 4-Way, 45° Fixed | | 3-5-8 | 5-6-7 | 6-8-11 | 8-11-15 | 9-13-18 | 11-15-22 | 12-17-25 | 13-20-32 | 15-22-35 |
| | | 2-Way, 45° Fixed | | 4-6-9 | 6-8-10 | 8-10-14 | 9-13-18 | 11-15-22 | 12-18-26 | 14-21-34 | 16-24-38 | 18-26-42 |
| | | 1-Way, Straight | | 5-6-7 | 7-9-12 | 9-13-18 | 11-15-22 | 13-19-31 | 15-22-36 | 17-26-41 | 19-29-46 | 21-32-51 |
| 0.45 | 20x4 14x6 10x8 | CFM | 42 | 85 | 127 | 169 | 212 | 254 | 296 | 338 | 381 | 423 |
| | | NC | | | 12 | 20 | 27 | 31 | 35 | 40 | 43 | 46 |
| | | 4-Way, 45° Fixed | | 3-5-8 | 5-6-8 | 6-9-15 | 8-12-19 | 10-13-19 | 11-15-22 | 12-18-26 | 14-21-33 | 15-23-37 |
| | | 2-Way, 45° Fixed | | 4-6-9 | 6-8-10 | 8-12-19 | 10-13-19 | 11-16-23 | 13-19-31 | 15-22-35 | 16-24-39 | 18-27-44 |
| | | 1-Way, Straight | | 5-7-11 | 7-11-17 | 9-14-22 | 11-16-23 | 13-20-32 | 15-23-37 | 18-26-42 | 20-29-47 | 22-33-53 |
| 0.55 | 24x4 16x6 12x8 | CFM | 52 | 103 | 155 | 207 | 259 | 310 | 362 | 414 | 465 | 517 |
| | | NC | | | 14 | 21 | 27 | 32 | 36 | 41 | 43 | 46 |
| | | 4-Way, 45° Fixed | 2-3-4 | 3-5-8 | 5-7-12 | 7-10-16 | 8-12-20 | 10-14-20 | 12-17-24 | 13-19-31 | 15-22-35 | 16-24-39 |
| | | 2-Way, 45° Fixed | 2-3-5 | 6-6-10 | 6-9-15 | 8-12-20 | 10-14-20 | 12-17-25 | 14-21-33 | 15-23-37 | 17-26-41 | 19-29-46 |
| | | 1-Way, Straight | 2-4-6 | 5-7-12 | 8-11-18 | 10-13-19 | 12-17-25 | 14-21-34 | 16-24-39 | 18-27-44 | 21-31-50 | 23-35-56 |
| 0.62 | 18x6 10x10 | CFM | 56 | 118 | 174 | 235 | 291 | 348 | 409 | 465 | 526 | 583 |
| | | NC | | | 14 | 22 | 28 | 33 | 37 | 41 | 44 | 47 |
| | | 4-Way, 45° Fixed | 2-3-4 | 4-6-9 | 5-8-13 | 7-11-17 | 9-13-21 | 10-15-21 | 12-17-24 | 13-20-32 | 15-22-36 | 17-25-40 |
| | | 2-Way, 45° Fixed | 2-3-5 | 4-6-10 | 6-9-15 | 8-12-20 | 10-16-25 | 12-17-25 | 14-21-34 | 16-24-38 | 18-27-43 | 20-29-47 |
| | | 1-Way, Straight | 2-3-6 | 5-7-12 | 8-11-18 | 10-14-20 | 12-19-30 | 15-22-35 | 17-26-41 | 19-29-46 | 21-32-51 | 24-36-57 |
| 0.7 | 30x4 20x6 14x8 12x10 | CFM | 66 | 132 | 197 | 263 | 329 | 395 | 461 | 526 | 592 | 658 |
| | | NC | 0 | 0 | 15 | 22 | 28 | 33 | 37 | 42 | 44 | 47 |
| | | 4-Way, 45° Fixed | 2-3-5 | 4-6-9 | 5-8-13 | 7-11-17 | 9-13-21 | 10-15-21 | 12-17-25 | 14-21-33 | 15-23-37 | 17-26-41 |
| | | 2-Way, 45° Fixed | 2-4-6 | 5-7-11 | 7-10-16 | 9-13-20 | 10-15-21 | 12-18-26 | 15-22-35 | 17-25-40 | 18-27-44 | 20-31-49 |
| | | 1-Way, Straight | 3-4-7 | 5-8-13 | 8-12-19 | 10-15-21 | 12-19-30 | 15-22-36 | 18-26-42 | 20-29-47 | 22-33-53 | 25-37-59 |
| 0.81 | 36x4 24x6 16x8 14x10 | CFM | 75 | 150 | 230 | 306 | 381 | 456 | 531 | 611 | 686 | 761 |
| | | NC | | | 16 | 23 | 29 | 34 | 38 | 42 | 45 | 48 |
| | | 4-Way, 45° Fixed | 2-3-5 | 4-6-9 | 6-9-14 | 8-11-18 | 9-14-22 | 11-15-22 | 12-18-26 | 14-21-34 | 16-24-38 | 18-27-43 |
| | | 2-Way, 45° Fixed | 2-4-6 | 5-7-11 | 7-10-16 | 9-14-22 | 11-15-22 | 13-19-31 | 15-22-36 | 17-26-41 | 19-29-46 | 21-32-51 |
| | | 1-Way, Straight | 3-4-7 | 5-8-13 | 8-12-20 | 11-15-22 | 13-20-32 | 16-24-38 | 18-27-44 | 20-31-49 | 23-34-55 | 26-39-62 |
| 0.87 | 18x8 12x12 | CFM | 80 | 165 | 244 | 329 | 409 | 489 | 573 | 653 | 738 | 818 |
| | | NC | | | 16 | 23 | 29 | 34 | 38 | 42 | 45 | 48 |
| | | 4-Way, 45° Fixed | 2-3-5 | 4-6-9 | 6-9-14 | 8-12-19 | 10-13-19 | 11-16-23 | 13-19-31 | 15-22-35 | 16-24-39 | 18-27-43 |
| | | 2-Way, 45° Fixed | 2-4-6 | 5-7-11 | 7-11-17 | 9-14-22 | 11-16-23 | 13-20-32 | 15-23-37 | 18-26-42 | 20-39-47 | 22-32-52 |
| | | 1-Way, Straight | 3-4-7 | 6-9-14 | 8-12-20 | 11-15-22 | 13-20-32 | 16-24-39 | 19-28-45 | 21-31-50 | 23-35-56 | 26-39-63 |

| Core Area Sq. Feet | Nominal Duct Size in Inches | Core Velocity | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |
|--------------------|--|--------------------|-------|---------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | Velocity Pressure | 0.001 | 0.002 | 0.006 | 0.01 | 0.016 | 0.022 | 0.031 | 0.04 | 0.051 | 0.062 |
| | | TP: Total Pressure | 0.003 | 0.014 | 0.031 | 0.056 | 0.09 | 0.131 | 0.175 | 0.225 | 0.29 | 0.355 |
| 1.02 | 30x6 20x8 16x10 14x12 | CFM | 94 | 193 | 287 | 385 | 479 | 573 | 672 | 766 | 865 | 959 |
| | | NC | | | 17 | 24 | 30 | 35 | 40 | 43 | 46 | 49 |
| | | 4-Way, 45° Fixed | 2-3-5 | 4-6-10 | 6-9-15 | 8-12-19 | 10-14-20 | 12-17-24 | 13-20-32 | 15-22-36 | 17-26-41 | 19-28-45 |
| | | 2-Way, 45° Fixed | 2-4-6 | 5-7-12 | 7-11-17 | 10-13-19 | 12-17-24 | 14-21-33 | 16-24-29 | 18-27-43 | 20-31-49 | 23-34-55 |
| | | 1-Way, Straight | 3-4-7 | 6-9-14 | 9-13-21 | 11-17-27 | 14-21-34 | 17-25-40 | 19-29-46 | 22-32-52 | 25-37-59 | 27-41-65 |
| 1.15 | 24x8 18x10 16x12 | CFM | 108 | 216 | 324 | 432 | 541 | 649 | 757 | 865 | 978 | 1081 |
| | | NC | | | 17 | 25 | 31 | 35 | 40 | 44 | 47 | 50 |
| | | 4-Way, 45° Fixed | 2-3-5 | 4-6-10 | 6-9-15 | 8-12-20 | 10-15-21 | 12-17-25 | 14-21-33 | 16-24-38 | 18-26-42 | 19-29-46 |
| | | 2-Way, 45° Fixed | 2-4-6 | 5-7-12 | 8-11-18 | 10-13-19 | 12-17-25 | 14-21-34 | 17-25-40 | 19-28-45 | 21-31-50 | 23-35-56 |
| | | 1-Way, Straight | 3-5-8 | 6-9-15 | 9-14-22 | 12-17-24 | 15-22-35 | 17-26-41 | 20-29-47 | 22-34-54 | 25-37-60 | 28-42-68 |
| 1.25 | 36x6 20x10 14x14 | CFM | 118 | 235 | 353 | 470 | 588 | 705 | 823 | 940 | 1053 | 1175 |
| | | NC | | | 17 | 25 | 31 | 36 | 41 | 44 | 47 | 50 |
| | | 4-Way, 45° Fixed | 2-3-5 | 4-5-6 | 6-8-11 | 8-12-20 | 10-15-21 | 12-17-25 | 14-21-34 | 16-24-38 | 18-27-43 | 20-29-47 |
| | | 2-Way, 45° Fixed | 2-4-6 | 5-6-8 | 8-10-14 | 10-14-20 | 12-18-26 | 15-22-35 | 17-26-41 | 19-29-46 | 21-32-51 | 24-26-57 |
| | | 1-Way, Straight | 3-5-8 | 6-8-11 | 9-13-18 | 12-17-25 | 15-22-35 | 18-26-42 | 20-30-48 | 23-34-55 | 26-39-62 | 29-43-69 |
| 1.35 | 16x14 18x12 | CFM | 127 | 254 | 381 | 508 | 635 | 761 | 888 | 1015 | 1147 | 1269 |
| | | NC | | | 18 | 25 | 31 | 36 | 41 | 44 | 47 | 50 |
| | | 4-Way, 45° Fixed | 2-4-6 | 4-5-6 | 7-10-16 | 9-13-21 | 10-15-21 | 12-18-26 | 15-22-35 | 16-24-39 | 18-27-43 | 20-30-48 |
| | | 2-Way, 45° Fixed | 3-4-7 | 5-7-9 | 8-12-19 | 10-15-21 | 12-18-26 | 15-22-36 | 18-26-42 | 20-29-47 | 22-33-53 | 25-37-59 |
| | | 1-Way, Straight | 3-5-8 | 6-8-11 | 10-13-19 | 12-17-25 | 15-22-36 | 18-27-43 | 21-31-50 | 23-35-56 | 26-39-63 | 29-44-70 |
| 1.53 | 30x8 24x10 20x12 18x14 16x16 | CFM | 146 | 287 | 432 | 573 | 719 | 865 | 1006 | 1147 | 1297 | 1438 |
| | | NC | | | 18 | 26 | 32 | 37 | 42 | 45 | 48 | 51 |
| | | 4-Way, 45° Fixed | 2-4-6 | 5-6-7 | 7-10-16 | 9-13-21 | 11-15-22 | 13-19-31 | 15-22-36 | 17-25-40 | 19-28-45 | 21-31-50 |
| | | 2-Way, 45° Fixed | 3-4-7 | 5-7-9 | 8-12-19 | 10-15-21 | 13-20-32 | 15-23-37 | 18-27-43 | 20-30-48 | 23-34-55 | 25-37-60 |
| | | 1-Way, Straight | 3-5-8 | 7-9-12 | 10-13-19 | 12-18-26 | 15-23-37 | 18-27-44 | 21-32-51 | 24-26-58 | 27-41-65 | 30-46-73 |
| 1.82 | 36x8 30x10 24x12 20x14 18x16 | CFM | 171 | 343 | 512 | 686 | 855 | 1025 | 1194 | 1372 | 1542 | 1711 |
| | | NC | | | 19 | 27 | 33 | 37 | 42 | 46 | 49 | 52 |
| | | 4-Way, 45° Fixed | 2-4-6 | 5-6-7 | 7-11-17 | 9-14-22 | 11-16-23 | 13-20-32 | 15-23-37 | 18-26-42 | 20-29-47 | 22-33-53 |
| | | 2-Way, 45° Fixed | 3-4-7 | 6-8-10 | 8-12-20 | 11-16-23 | 14-21-33 | 16-24-29 | 19-28-45 | 21-31-50 | 24-36-57 | 26-39-63 |
| | | 1-Way, Straight | 3-5-8 | 7-9-12 | 10-14-20 | 13-20-32 | 16-24-39 | 19-29-46 | 22-34-54 | 25-37-60 | 29-42-68 | 32-48-76 |
| 2.1 | 24x14 30x16 18x18 | CFM | 197 | 395 | 592 | 790 | 987 | 1184 | 1382 | 1579 | 1777 | 1974 |
| | | NC | 0 | 0 | 20 | 27 | 33 | 38 | 43 | 46 | 49 | 52 |
| | | 4-Way, 45° Fixed | 2-4-6 | 5-6-8 | 8-11-18 | 10-13-19 | 12-17-24 | 14-21-34 | 16-24-39 | 18-27-44 | 20-31-49 | 23-34-55 |
| | | 2-Way, 45° Fixed | 3-4-7 | 6-8-10 | 9-13-21 | 12-17-24 | 14-21-34 | 17-25-40 | 19-29-46 | 22-32-52 | 25-37-59 | 28-41-66 |
| | | 1-Way, Straight | 4-6-9 | 7-10-13 | 10-15-21 | 14-21-33 | 17-25-40 | 20-30-48 | 23-34-55 | 26-39-62 | 29-44-70 | 33-50-80 |
| 2.35 | 36x10 30x12 24x16 20x18 | CFM | 221 | 442 | 663 | 884 | 1109 | 1325 | 1542 | 1767 | 1993 | 2209 |
| | | NC | | | 20 | 28 | 34 | 38 | 43 | 47 | 50 | 53 |
| | | 4-Way, 45° Fixed | 2-4-6 | 5-6-8 | 8-11-18 | 10-14-20 | 12-17-25 | 15-22-35 | 17-25-40 | 19-28-45 | 21-31-50 | 24-36-57 |
| | | 2-Way, 45° Fixed | 3-5-8 | 6-8-11 | 9-14-22 | 12-17-24 | 15-22-35 | 18-26-42 | 20-30-48 | 22-34-54 | 25-38-61 | 28-42-68 |
| | | 1-Way, Straight | 4-6-9 | 7-10-13 | 11-15-22 | 14-21-33 | 18-26-42 | 20-31-49 | 24-36-57 | 27-40-64 | 30-45-72 | 34-51-82 |
| 2.68 | 36x12 30x14 24x18 20x20 | CFM | 254 | 503 | 757 | 1006 | 1260 | 1513 | 1767 | 2012 | 2265 | 2519 |
| | | NC | | | 21 | 28 | 34 | 40 | 44 | 47 | 50 | 53 |
| | | 4-Way, 45° Fixed | 3-4-7 | 5-7-9 | 8-12-19 | 10-15-21 | 12-18-26 | 15-22-36 | 18-26-42 | 20-29-47 | 22-32-52 | 25-37-59 |
| | | 2-Way, 45° Fixed | 3-5-8 | 6-8-11 | 9-14-22 | 12-17-25 | 15-22-36 | 20-30-48 | 20-31-49 | 23-35-56 | 26-39-62 | 29-44-70 |
| | | 1-Way, Straight | 4-6-9 | 8-10-14 | 11-16-23 | 15-22-35 | 18-27-43 | 21-32-51 | 25-37-59 | 28-41-66 | 31-47-75 | 35-53-85 |
| 3.15 | 36x16 30x18 24x24 | CFM | 296 | 592 | 888 | 1184 | 1485 | 1777 | 2068 | 2369 | 2670 | 2961 |
| | | NC | | 10 | 21 | 29 | 35 | 41 | 45 | 48 | 51 | 54 |
| | | 4-Way, 45° Fixed | 3-4-7 | 5-7-9 | 8-12-19 | 11-15-22 | 13-19-31 | 15-23-37 | 18-27-43 | 20-31-49 | 23-34-55 | 26-39-62 |
| | | 2-Way, 45° Fixed | 3-5-8 | 7-9-12 | 10-14-20 | 12-18-26 | 16-24-38 | 19-28-45 | 21-32-51 | 24-36-58 | 27-41-65 | 30-46-73 |
| | | 1-Way, Straight | 4-5-6 | 8-11-15 | 12-17-24 | 15-22-36 | 19-28-45 | 22-3-53 | 26-39-62 | 29-43-69 | 33-49-79 | 37-56-89 |
| 3.65 | 36x18 30x20 | CFM | 343 | 686 | 1034 | 1372 | 1711 | 2059 | 2406 | 2745 | 3083 | 3431 |
| | | NC | | 11 | 22 | 30 | 36 | 41 | 45 | 49 | 52 | 55 |
| | | 4-Way, 45° Fixed | 3-4-7 | 5-7-9 | 8-12-19 | 11-15-22 | 13-19-31 | 15-23-37 | 18-27-43 | 21-31-50 | 24-36-57 | 27-40-64 |
| | | 2-Way, 45° Fixed | 3-5-8 | 7-9-12 | 10-14-20 | 12-18-26 | 16-24-38 | 19-28-45 | 21-32-51 | 25-37-60 | 28-42-68 | 32-48-76 |
| | | 1-Way, Straight | 4-5-6 | 8-11-15 | 12-17-24 | 15-22-36 | 19-28-45 | 22-33-53 | 26-39-62 | 30-45-72 | 34-51-83 | 38-57-92 |

CFM: Cubic Feet per Minute

*All pressures are in inches of water.

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FPM: Feet per Minute

* Blank areas denote NC values less than 10 and CFM values less than 50.

TP: Total Pressure, inches w.g.

*Throw values are measured in feet for terminal velocities of 150/100/50 FPM.

T: Throw in feet

*Throw values are based on fixed louvers set at 45 degrees.

NC: Noise Criteria

* Throw may be increased or decreased by as much as 20% by changing angle of louver.