|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Regular 90 Zone 1 Maria’s Restaurant Duct Design | | | | | | | | | | | | | | | |
|  | A | B | C | | D | E | F | G | H | I | J | K | L | M | N |
| Duct Run | Section | Component | | CFM | f/100 | Velocity  fpm | Velocity  Pressure\* | Loss  Coef. | Dia. | Non-Round Size | Duct Material  Correction | Loss Item | Loss for Section | Total Loss |
| Ft. | Item |
| 1 | Casing | A1 | - | OB Damp | 2,400 | - | 617 | - | - | - | - | - | 0.015 |  |  |
| 2 |  | A2 | - | Filter | 2,400 | - | 400 | - | - | - | - | - | 0.100 |  |  |
| 3 |  | A3 | - | Coil | 2,400 | - |  | - | - | - | - | - | 0.350 | 0.465 | 0.465 |
| 4 | Supply Fan | A4 | - | Inlet | 2,400 | - | 500 | - | 0 | - | - | - | 0 |  |  |
| 5 |  |  | - | Outlet | 2,400 | - | 617 | - | 0 | - | - | - | 0 | 0 | 0.465 |
| 6 | B to C | BC | - | Man Q  Table A | - | - | - | - | - | - | - | - | - |  |  |
| 7 |  |  | 15 | Straight | 2,400 | 0.02 | 600 | - | - | 29 | 24×27 |  | 0.003 |  |  |
| 8 |  |  |  | 90 | 2,400 |  | 600 | 0.0224 | 1.2 | 27 | 24×27 |  | 0.027 |  |  |
| 9 |  |  | 7 | Straight | 2,400 | 0.02 | 600 | - | - | 27 | 24×27 | - | 0.0014 | 0.0314 | 0.496 |
| 10 | C to H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11 |  | C |  | Wye Rect. | 2,400/2,000 | - | - | 0.2494 | 0 | - | 20×25 | - | 0 |  |  |
| 12 |  |  | 9 | Straight | 2,000 | 0.02 | 585 | - | - | 25 | 20×25 | - | 0.0018 |  |  |
| 13 |  | D |  | Wye Rect. | 2,000/1,600 |  | 545 | 0.1264 | 0 | 25/23 | 17×25 | - | 0 |  |  |
| 14 |  |  | 14 | Straight | 1,600 | 0.02 | 545 | - | - | 23 | 17×25 | - | 0.0028 |  |  |
| 15 |  |  |  | 90 | 1,600 | 0.02 | 545 | 0.0185 | 1.2 | 23 | 17×25 |  | 0.022 |  |  |
| 16 |  |  | 5 | Straight | - | 0.02 | 545 | - | - | 23 | 17×25 |  | 0.001 |  |  |
| 17 |  | E |  | Wye Rect. | 1,600/1,200 | - | 545 | 0.0711 | 0 | 23/21 | 14×25 | - | 0 |  |  |
| 18 |  |  | 11 | Straight | 1,200 | 0.02 | 520 | - | - | 21 | 14×25 | - | 0.0022 |  |  |
| 19 |  | F | - | Wye Rect. | 1,200/800 | - | 450 | 0.0399 | 0 | 21/18 | 11×25 | - | 0 |  |  |
| 20 |  |  | 4 | Straight | - | 0.02 | 450 | - | - | 18 |  |  | 0.0008 |  |  |
| 21 |  |  | - | 90 | 800 | - | 450 | 0.0126 | 1.2 | 18 | 11×25 | - | 0.015 |  |  |
| 22 |  |  | 11 | Straight | - | 0.02 | 450 | - | - | 18 | 11×25 |  | 0.0022 |  |  |
| 23 |  | G | - | Wye Rect. | 800/400 | - | 380 | 0.01 | 0 | 18/14 |  | - | 0 |  |  |
| 24 |  |  | 6 | Straight | 400 | 0.02 | 380 | - | 0.002 | 14 | 7×25 | - | 0.0012 |  |  |
| 25 |  |  | - | 90 | 400 | - | 380 | 0.0090 | 1.2 | 14 | 7×25 | - | 0.0108 |  |  |
| 26 |  |  | 3 | Straight | 400 | 0.02 | 380 | - | 0.002 | 14 | 7×25 | - | 0.002 |  |  |
| 27 |  | H |  | Diffuser | 400 | - | 650 | - | - | - | - | - | .025 | 0.0868 | 0.583 |
| \*Velocity Pressure (fpm) = [velocity ÷ 4005 × (air correction factor when needed)]2 Note: no air correction factor needed for Maria’s location. \*\* OEM Data  Note: for Wye fittings the rectangular listed in non-round column J is the outlet side. | | | | | | | | | | | | | | | |