

Water Loss Through a Nozzle

| Nozzle Pressure lbs/sq in | Gallons per Minute Discharge for a given Nozzle Diamter (inches) | | | | | | | | | | | | |
|------------------------------|---|------|-------|------|-------|------|-------|------|-------|------|------|------|------|
| | 1/16" | 1/8" | 3/16" | 1/4" | 5/16" | 3/8" | 7/16" | 1/2" | 9/16" | 5/8" | 3/4" | 7/8" | 1" |
| 10 | 0.38 | 1.5 | 3.3 | 5.9 | 9.2 | 13.3 | 18.1 | 23.6 | 30.2 | 36.9 | 53.3 | 72.5 | 94.8 |
| 15 | 0.45 | 1.8 | 4.1 | 7.2 | 11.5 | 16.3 | 22.4 | 28.9 | 36.7 | 45.2 | 65.1 | 88.7 | 116 |
| 20 | 0.53 | 2.0 | 4.7 | 8.3 | 13.1 | 18.7 | 25.6 | 33.4 | 42.4 | 52.2 | 75.4 | 102 | 134 |
| 25 | 0.59 | 2.3 | 5.3 | 9.3 | 14.6 | 21.0 | 28.7 | 37.4 | 47.3 | 58.2 | 84.0 | 115 | 149 |
| 30 | 0.64 | 2.6 | 5.8 | 10.2 | 16.0 | 23.1 | 31.4 | 40.9 | 51.9 | 63.9 | 92.2 | 126 | 164 |
| 35 | 0.69 | 2.8 | 6.2 | 11.1 | 17.1 | 25.0 | 33.8 | 44.2 | 56.1 | 69.0 | 99.8 | 136 | 177 |
| 40 | 0.74 | 3.0 | 6.7 | 11.7 | 18.4 | 26.0 | 36.2 | 47.3 | 59.9 | 73.8 | 106 | 145 | 189 |
| 45 | 0.79 | 3.1 | 7.1 | 12.6 | 19.5 | 28.2 | 38.3 | 50.1 | 63.4 | 78.2 | 113 | 153 | 200 |
| 50 | 0.83 | 3.3 | 7.4 | 13.2 | 20.6 | 29.9 | 40.5 | 52.8 | 67.0 | 82.5 | 119 | 162 | 211 |
| 60 | 0.90 | 3.6 | 8.2 | 14.5 | 22.6 | 32.6 | 44.3 | 57.9 | 73.3 | 90.4 | 130 | 177 | 232 |
| 70 | 0.98 | 3.9 | 8.8 | 15.7 | 24.4 | 35.3 | 47.9 | 62.6 | 79.3 | 97.8 | 141 | 192 | 251 |
| 80 | 1.05 | 4.2 | 9.4 | 16.8 | 26.1 | 37.6 | 51.2 | 66.8 | 84.8 | 105 | 151 | 205 | 268 |
| 90 | 1.11 | 4.4 | 10.0 | 17.7 | 27.8 | 40.1 | 54.5 | 70.8 | 90.3 | 111 | 160 | 218 | 285 |
| 100 | 1.17 | 4.7 | 10.4 | 18.7 | 29.2 | 42.2 | 57.3 | 74.9 | 95.0 | 117 | 169 | 229 | 300 |
| 120 | 1.23 | 5.2 | 11.5 | 20.4 | 31.8 | 46.0 | 62.4 | 81.8 | 103 | 128 | 184 | 250 | 327 |
| 140 | 1.38 | 5.7 | 12.4 | 22.1 | 34.4 | 49.8 | 67.6 | 88.3 | 112 | 138 | 199 | 271 | 354 |
| 160 | 1.32 | 6.3 | 13.3 | 23.6 | 36.9 | 53.3 | 72.3 | 94.6 | 120 | 148 | 213 | 289 | 378 |
| 180 | 1.36 | 6.9 | 14.1 | 25.0 | 39.0 | 56.4 | 76.5 | 100 | 127 | 156 | 225 | 306 | 400 |
| 200 | 1.38 | 7.5 | 14.9 | 26.4 | 41.1 | 59.5 | 81.6 | 106 | 134 | 165 | 238 | 323 | 423 |

Note:

The above discharge valvues are theoretical. Actual values will only be 95% of the above values, depending on such factors as shap of the nozzle, bore smoothnes, etc.