



FRICTION LOSS CHARACTERISTICS

PVC Class 200 Plastic Pipe IPS Dimensions

PVC 1120, 1220 SDR 21 C=150

Loss per 100 feet of pipe in PSI



| Size | * ½" | ¾" | 1" | 1¼" | 1½" | 2" | 2½" | 3" | 4" | Size | | | | | | | | | | | |
|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|----------|------|-----|
| OD | 0.814 | 1.050 | 1.315 | 1.660 | 1.900 | 2.375 | 2.875 | 3.500 | 4.500 | OD | | | | | | | | | | | |
| ID | 0.716 | 0.930 | 1.189 | 1.502 | 1.720 | 2.149 | 2.601 | 3.166 | 4.072 | ID | | | | | | | | | | | |
| Wall | 0.062 | 0.060 | 0.063 | 0.079 | 0.090 | 0.113 | 0.137 | 0.167 | 0.214 | Wall | | | | | | | | | | | |
| Flow GPM | Velocity FPS | PSI Loss | Velocity FPS | PSI Loss | Velocity FPS | PSI Loss | Velocity FPS | PSI Loss | Velocity FPS | PSI Loss | Velocity FPS | PSI Loss | Velocity FPS | PSI Loss | Velocity FPS | PSI Loss | Velocity FPS | PSI Loss | Flow GPM | | |
| 1 | 0.79 | 0.22 | 0.47 | 0.06 | 0.28 | 0.02 | 0.18 | 0.01 | 0.13 | 0.00 | | | | | | | | | 1 | | |
| 2 | 1.59 | 0.78 | 0.94 | 0.22 | 0.57 | 0.07 | 0.36 | 0.02 | 0.27 | 0.01 | 0.17 | 0.00 | | | | | | | 2 | | |
| 3 | 2.38 | 1.65 | 1.42 | 0.46 | 0.86 | 0.14 | 0.54 | 0.04 | 0.41 | 0.02 | 0.26 | 0.01 | 0.18 | 0.00 | | | | | 3 | | |
| 4 | 3.18 | 2.82 | 1.89 | 0.79 | 1.15 | 0.24 | 0.72 | 0.08 | 0.55 | 0.04 | 0.35 | 0.01 | 0.24 | 0.01 | | | | | 4 | | |
| 5 | 3.97 | 4.26 | 2.36 | 1.20 | 1.44 | 0.36 | 0.90 | 0.12 | 0.68 | 0.06 | 0.44 | 0.02 | 0.30 | 0.01 | | | | | 5 | | |
| 6 | 4.77 | 5.97 | 2.83 | 1.68 | 1.73 | 0.51 | 1.08 | 0.16 | 0.82 | 0.08 | 0.53 | 0.03 | 0.36 | 0.01 | 0.24 | 0.00 | | | 6 | | |
| 7 | 5.57 | 7.95 | 3.30 | 2.23 | 2.02 | 0.67 | 1.26 | 0.22 | 0.96 | 0.11 | 0.61 | 0.04 | 0.42 | 0.01 | 0.28 | 0.01 | | | 7 | | |
| 8 | 6.36 | 10.18 | 3.77 | 2.85 | 2.30 | 0.86 | 1.44 | 0.28 | 1.10 | 0.14 | 0.70 | 0.05 | 0.48 | 0.02 | 0.32 | 0.01 | | | 8 | | |
| 9 | 7.16 | 12.66 | 4.25 | 3.55 | 2.59 | 1.07 | 1.62 | 0.34 | 1.24 | 0.18 | 0.79 | 0.06 | 0.54 | 0.02 | 0.36 | 0.01 | | | 9 | | |
| 10 | 7.95 | 15.38 | 4.72 | 4.31 | 2.88 | 1.30 | 1.80 | 0.42 | 1.37 | 0.22 | 0.88 | 0.07 | 0.60 | 0.03 | 0.40 | 0.01 | | | 10 | | |
| 11 | 8.75 | 18.35 | 5.19 | 5.15 | 3.17 | 1.56 | 1.98 | 0.50 | 1.51 | 0.26 | 0.97 | 0.09 | 0.66 | 0.03 | 0.44 | 0.01 | | | 11 | | |
| 12 | 9.55 | 21.56 | 5.66 | 6.05 | 3.46 | 1.83 | 2.17 | 0.59 | 1.65 | 0.30 | 1.06 | 0.10 | 0.72 | 0.04 | 0.48 | 0.02 | 0.29 | 0.00 | 12 | | |
| 14 | 11.14 | 28.69 | 6.60 | 8.05 | 4.04 | 2.43 | 2.53 | 0.78 | 1.93 | 0.40 | 1.23 | 0.14 | 0.84 | 0.05 | 0.56 | 0.02 | 0.34 | 0.01 | 14 | | |
| 16 | 12.73 | 36.74 | 7.55 | 1.030 | 4.61 | 3.11 | 2.89 | 1.00 | 2.20 | 0.52 | 1.41 | 0.17 | 0.96 | 0.07 | 0.65 | 0.03 | 0.39 | 0.01 | 16 | | |
| 18 | 14.32 | 45.69 | 8.49 | 12.81 | 5.19 | 3.87 | 3.25 | 1.24 | 2.48 | 0.64 | 1.59 | 0.22 | 1.08 | 0.09 | 0.73 | 0.03 | 0.44 | 0.01 | 18 | | |
| 20 | 15.91 | 55.54 | 9.43 | 15.58 | 5.77 | 4.71 | 3.61 | 1.51 | 2.75 | 0.78 | 1.76 | 0.26 | 1.20 | 0.10 | 0.81 | 0.04 | 0.49 | 0.01 | 20 | | |
| 22 | 17.50 | 66.26 | 10.38 | 18.58 | 6.34 | 5.62 | 3.97 | 1.80 | 3.03 | 0.93 | 1.94 | 0.32 | 1.32 | 0.12 | 0.89 | 0.05 | 0.54 | 0.01 | 22 | | |
| 24 | 19.10 | 77.84 | 11.32 | 21.83 | 6.92 | 6.60 | 4.34 | 2.12 | 3.30 | 1.09 | 2.12 | 0.37 | 1.44 | 0.15 | 0.97 | 0.06 | 0.59 | 0.02 | 24 | | |
| 26 | | | 12.27 | 25.32 | 7.50 | 7.65 | 4.70 | 2.46 | 3.58 | 1.27 | 2.29 | 0.43 | 1.56 | 0.17 | 1.05 | 0.07 | 0.63 | 0.02 | 26 | | |
| 28 | | | 13.21 | 29.04 | 8.08 | 8.78 | 5.06 | 2.82 | 3.86 | 1.46 | 2.47 | 0.49 | 1.68 | 0.19 | 1.13 | 0.07 | 0.68 | 0.02 | 28 | | |
| 30 | | | 14.15 | 33.00 | 8.65 | 9.98 | 5.42 | 3.20 | 4.13 | 1.66 | 2.65 | 0.56 | 1.80 | 0.22 | 1.22 | 0.09 | 0.73 | 0.02 | 30 | | |
| 35 | | | 16.51 | 43.91 | 10.10 | 13.27 | 6.32 | 4.26 | 4.82 | 2.20 | 3.09 | 0.75 | 2.11 | 0.29 | 1.42 | 0.11 | 0.86 | 0.03 | 35 | | |
| 40 | | | 18.87 | 56.23 | 11.54 | 17.00 | 7.23 | 5.45 | 5.51 | 2.82 | 3.53 | 0.95 | 2.41 | 0.38 | 1.62 | 0.14 | 0.98 | 0.04 | 40 | | |
| 45 | | | | 12.98 | 21.14 | 8.13 | 6.78 | 6.20 | 3.51 | 3.97 | 1.19 | 2.71 | 0.47 | 1.83 | 0.18 | 1.10 | 0.05 | 1.10 | 0.05 | 45 | |
| 50 | | | | 14.42 | 25.70 | 9.04 | 8.24 | 6.89 | 4.26 | 4.41 | 1.44 | 3.01 | 0.57 | 2.03 | 0.22 | 1.23 | 0.06 | 1.23 | 0.06 | 50 | |
| 55 | | | | 15.87 | 30.66 | 9.94 | 9.83 | 7.58 | 5.09 | 4.85 | 1.72 | 3.31 | 0.68 | 2.23 | 0.26 | 1.35 | 0.08 | 1.35 | 0.08 | 55 | |
| 60 | | | | 17.31 | 36.02 | 10.85 | 11.55 | 8.27 | 5.97 | 5.30 | 2.02 | 3.61 | 0.80 | 2.44 | 0.31 | 1.47 | 0.09 | 1.47 | 0.09 | 60 | |
| 65 | | | | 18.75 | 41.77 | 11.75 | 13.40 | 8.96 | 6.93 | 5.74 | 2.35 | 3.92 | 0.93 | 2.64 | 0.36 | 1.59 | 0.10 | 1.59 | 0.10 | 65 | |
| 70 | | | | | | 12.65 | 15.37 | 9.65 | 7.95 | 6.18 | 2.69 | 4.22 | 1.06 | 2.84 | 0.41 | 1.72 | 0.12 | 1.72 | 0.12 | 70 | |
| 75 | | | | | | 13.56 | 17.47 | 10.34 | 9.03 | 6.62 | 3.06 | 4.52 | 1.21 | 3.05 | 0.46 | 1.84 | 0.14 | 1.84 | 0.14 | 75 | |
| 80 | | | | | | | 14.46 | 19.68 | 11.03 | 10.18 | 7.06 | 3.44 | 4.82 | 1.36 | 3.25 | 0.52 | 1.96 | 0.15 | 1.96 | 0.15 | 80 |
| 85 | | | | | | | 15.37 | 22.02 | 11.72 | 11.39 | 7.50 | 3.85 | 5.12 | 1.52 | 3.45 | 0.59 | 2.09 | 0.17 | 2.09 | 0.17 | 85 |
| 90 | | | | | | | 16.27 | 24.48 | 12.41 | 12.66 | 7.95 | 4.28 | 5.42 | 1.69 | 3.66 | 0.65 | 2.21 | 0.19 | 2.21 | 0.19 | 90 |
| 95 | | | | | | | 17.18 | 27.06 | 13.10 | 13.99 | 8.39 | 4.74 | 5.72 | 1.87 | 3.86 | 0.72 | 2.33 | 0.21 | 2.33 | 0.21 | 95 |
| 100 | | | | | | | 18.08 | 29.76 | 13.79 | 15.39 | 8.83 | 5.21 | 6.03 | 2.06 | 4.07 | 0.79 | 2.46 | 0.23 | 2.46 | 0.23 | 100 |
| 110 | | | | | | | | 15.17 | 18.36 | 9.71 | 6.21 | 6.63 | 2.45 | 4.47 | 0.94 | 2.70 | 0.28 | 2.70 | 0.28 | 110 | |
| 120 | | | | | | | | 16.54 | 21.57 | 10.60 | 7.30 | 7.23 | 2.88 | 4.48 | 1.11 | 2.95 | 0.33 | 2.95 | 0.33 | 120 | |
| 130 | | | | | | | | 17.92 | 25.02 | 11.48 | 8.47 | 7.84 | 3.34 | 5.29 | 1.29 | 3.19 | 0.38 | 3.19 | 0.38 | 130 | |
| 140 | | | | | | | | 19.30 | 28.70 | 12.36 | 9.71 | 8.44 | 3.84 | 5.69 | 1.47 | 3.44 | 0.43 | 3.44 | 0.43 | 140 | |
| 150 | | | | | | | | | 13.25 | 11.04 | 9.04 | 4.36 | 6.10 | 1.68 | 3.69 | 0.49 | 3.69 | 0.49 | 150 | | |
| 160 | | | | | | | | | 14.13 | 12.44 | 9.64 | 4.91 | 6.51 | 1.89 | 3.93 | 0.55 | 3.93 | 0.55 | 160 | | |
| 170 | | | | | | | | | 15.01 | 13.91 | 10.25 | 5.50 | 6.91 | 2.11 | 4.18 | 0.62 | 4.18 | 0.62 | 170 | | |
| 180 | | | | | | | | | 15.90 | 15.47 | 10.85 | 6.11 | 7.32 | 2.35 | 4.42 | 0.69 | 4.42 | 0.69 | 180 | | |
| 190 | | | | | | | | | 16.78 | 17.10 | 11.45 | 6.75 | 7.73 | 2.60 | 4.67 | 0.76 | 4.67 | 0.76 | 190 | | |
| 200 | | | | | | | | | 17.66 | 18.80 | 12.06 | 7.43 | 8.14 | 2.85 | 4.92 | 0.84 | 4.92 | 0.84 | 200 | | |
| 225 | | | | | | | | | 19.87 | 23.38 | 13.56 | 9.24 | 9.15 | 3.55 | 5.53 | 1.04 | 5.53 | 1.04 | 225 | | |
| 250 | | | | | | | | | | | 15.07 | 11.23 | 10.17 | 4.31 | 6.15 | 1.27 | 6.15 | 1.27 | 250 | | |
| 275 | | | | | | | | | | | 16.58 | 13.39 | 11.19 | 5.15 | 6.76 | 1.51 | 6.76 | 1.51 | 275 | | |
| 300 | | | | | | | | | | | 18.09 | 15.74 | 12.21 | 6.05 | 7.38 | 1.78 | 7.38 | 1.78 | 300 | | |
| 325 | | | | | | | | | | | 19.60 | 18.25 | 13.22 | 7.01 | 7.99 | 2.06 | 7.99 | 2.06 | 325 | | |



10835 Grissom Lane
Dallas, TX 75229

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* ½" = SDR 13.5 Class 315 PVC Pipe
Note: Velocities in shaded (Red) area exceed 5 feet per second and should be used with caution