

PVC Class 315 IPS Plastic Pipe

(1120, 1220) SDR 13.5 C=150

PVC Class 315 IPS Plastic Pipe

psi Loss per 100 Feet of Pipe (psi/100 ft.)

Sizes 1/2" through 6" Flow 1 through 600 gpm

| Size     | 1/2"         |          | 3/4"         |          | 1"           |          | 1 1/4"       |          | 1 1/2"       |          | 2"           |          | 2 1/2"       |          | 3"           |          | 4"           |          | 6"           |          |
|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|
| O.D.     | 0.840        |          | 1.050        |          | 1.315        |          | 1.660        |          | 1.900        |          | 2.375        |          | 2.875        |          | 3.500        |          | 4.500        |          | 6.625        |          |
| I.D.     | 0.716        |          | 0.894        |          | 1.121        |          | 1.414        |          | 1.618        |          | 2.023        |          | 2.449        |          | 2.982        |          | 3.834        |          | 5.643        |          |
| Wall Thk | 0.062        |          | 0.078        |          | 0.097        |          | 0.123        |          | 0.141        |          | 0.176        |          | 0.213        |          | 0.259        |          | 0.333        |          | 0.491        |          |
| 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 | Velocity fps | psi Loss |
| 1        | 0.80         | 0.22     | 0.51         | 0.07     | 0.33         | 0.02     | 0.20         | 0.01     | 0.16         | 0.00     | 0.10         | 0.00     | 0.07         | 0.00     | 0.05         | 0.00     | 0.03         | 0.00     | 0.01         | 0.00     |
| 2        | 1.59         | 0.78     | 1.02         | 0.26     | 0.65         | 0.09     | 0.41         | 0.03     | 0.31         | 0.01     | 0.20         | 0.00     | 0.14         | 0.00     | 0.09         | 0.00     | 0.06         | 0.00     | 0.03         | 0.00     |
| 3        | 2.39         | 1.65     | 1.53         | 0.56     | 0.98         | 0.19     | 0.61         | 0.06     | 0.47         | 0.03     | 0.30         | 0.01     | 0.20         | 0.00     | 0.14         | 0.00     | 0.08         | 0.00     | 0.04         | 0.00     |
| 4        | 3.19         | 2.81     | 2.04         | 0.96     | 1.30         | 0.32     | 0.82         | 0.10     | 0.62         | 0.05     | 0.40         | 0.02     | 0.27         | 0.01     | 0.18         | 0.00     | 0.11         | 0.00     | 0.05         | 0.00     |
| 5        | 3.98         | 4.25     | 2.56         | 1.44     | 1.63         | 0.48     | 1.02         | 0.16     | 0.78         | 0.08     | 0.50         | 0.03     | 0.34         | 0.01     | 0.23         | 0.00     | 0.14         | 0.00     | 0.06         | 0.00     |
| 6        | 4.78         | 5.96     | 3.07         | 2.02     | 1.95         | 0.67     | 1.23         | 0.22     | 0.94         | 0.11     | 0.60         | 0.04     | 0.41         | 0.02     | 0.28         | 0.01     | 0.17         | 0.00     | 0.08         | 0.00     |
| 7        | 5.58         | 7.92     | 3.58         | 2.69     | 2.28         | 0.89     | 1.43         | 0.29     | 1.09         | 0.15     | 0.70         | 0.05     | 0.48         | 0.02     | 0.32         | 0.01     | 0.19         | 0.00     | 0.09         | 0.00     |
| 8        | 6.37         | 10.14    | 4.09         | 3.44     | 2.60         | 1.15     | 1.63         | 0.37     | 1.25         | 0.19     | 0.80         | 0.06     | 0.54         | 0.03     | 0.37         | 0.01     | 0.22         | 0.00     | 0.10         | 0.00     |
| 9        | 7.17         | 12.61    | 4.60         | 4.28     | 2.93         | 1.42     | 1.84         | 0.46     | 1.40         | 0.24     | 0.90         | 0.08     | 0.61         | 0.03     | 0.41         | 0.01     | 0.25         | 0.00     | 0.12         | 0.00     |
| 10       | 7.97         | 15.33    | 5.11         | 5.20     | 3.25         | 1.73     | 2.04         | 0.56     | 1.56         | 0.29     | 1.00         | 0.10     | 0.68         | 0.04     | 0.46         | 0.01     | 0.28         | 0.00     | 0.13         | 0.00     |
| 11       | 8.77         | 18.28    | 5.62         | 6.21     | 3.58         | 2.06     | 2.25         | 0.67     | 1.72         | 0.35     | 1.10         | 0.12     | 0.75         | 0.05     | 0.51         | 0.02     | 0.31         | 0.01     | 0.14         | 0.00     |
| 12       | 9.56         | 21.47    | 6.13         | 7.29     | 3.90         | 2.42     | 2.45         | 0.78     | 1.87         | 0.41     | 1.20         | 0.14     | 0.82         | 0.05     | 0.55         | 0.02     | 0.33         | 0.01     | 0.15         | 0.00     |
| 14       | 11.16        | 28.56    | 7.16         | 9.70     | 4.55         | 3.22     | 2.86         | 1.04     | 2.18         | 0.54     | 1.40         | 0.18     | 0.95         | 0.07     | 0.64         | 0.03     | 0.39         | 0.01     | 0.18         | 0.00     |
| 16       | 12.75        | 36.56    | 8.18         | 12.41    | 5.20         | 4.13     | 3.27         | 1.33     | 2.50         | 0.69     | 1.60         | 0.23     | 1.09         | 0.09     | 0.74         | 0.04     | 0.44         | 0.01     | 0.21         | 0.00     |
| 18       | 14.34        | 45.46    | 9.20         | 15.44    | 5.85         | 5.13     | 3.68         | 1.66     | 2.81         | 0.86     | 1.80         | 0.29     | 1.23         | 0.11     | 0.83         | 0.04     | 0.50         | 0.01     | 0.23         | 0.00     |
| 20       | 15.94        | 55.25    | 10.22        | 18.76    | 6.50         | 6.24     | 4.09         | 2.02     | 3.12         | 1.05     | 2.00         | 0.35     | 1.36         | 0.14     | 0.92         | 0.05     | 0.56         | 0.02     | 0.26         | 0.00     |
| 22       | 17.53        | 65.90    | 11.24        | 22.37    | 7.15         | 7.44     | 4.49         | 2.40     | 3.43         | 1.25     | 2.20         | 0.42     | 1.50         | 0.17     | 1.01         | 0.06     | 0.61         | 0.02     | 0.28         | 0.00     |
| 24       | 19.12        | 77.41    | 12.27        | 26.28    | 7.80         | 8.74     | 4.90         | 2.82     | 3.74         | 1.47     | 2.40         | 0.49     | 1.63         | 0.20     | 1.10         | 0.07     | 0.67         | 0.02     | 0.31         | 0.00     |
| 26       |              |          | 13.29        | 30.48    | 8.45         | 10.14    | 5.31         | 3.27     | 4.06         | 1.70     | 2.60         | 0.57     | 1.77         | 0.23     | 1.19         | 0.09     | 0.72         | 0.03     | 0.33         | 0.00     |
| 28       |              |          | 14.31        | 34.95    | 9.10         | 11.62    | 5.72         | 3.76     | 4.37         | 1.95     | 2.79         | 0.66     | 1.91         | 0.26     | 1.29         | 0.10     | 0.78         | 0.03     | 0.36         | 0.00     |
| 30       |              |          | 15.33        | 39.71    | 9.75         | 13.21    | 6.13         | 4.27     | 4.68         | 2.22     | 2.99         | 0.75     | 2.04         | 0.29     | 1.38         | 0.11     | 0.83         | 0.03     | 0.38         | 0.01     |
| 35       |              |          | 17.89        | 52.82    | 11.38        | 17.57    | 7.15         | 5.68     | 5.46         | 2.95     | 3.49         | 0.99     | 2.38         | 0.39     | 1.61         | 0.15     | 0.97         | 0.04     | 0.45         | 0.01     |
| 40       |              |          |              |          | 13.00        | 22.49    | 8.17         | 7.27     | 6.24         | 3.77     | 3.99         | 1.27     | 2.72         | 0.50     | 1.84         | 0.19     | 1.11         | 0.06     | 0.51         | 0.01     |
| 45       |              |          |              |          | 14.63        | 27.96    | 9.19         | 9.03     | 7.02         | 4.69     | 4.49         | 1.58     | 3.06         | 0.62     | 2.07         | 0.24     | 1.25         | 0.07     | 0.58         | 0.01     |
| 50       |              |          |              |          | 16.25        | 33.98    | 10.22        | 10.98    | 7.80         | 5.70     | 4.99         | 1.92     | 3.41         | 0.76     | 2.30         | 0.29     | 1.39         | 0.09     | 0.64         | 0.01     |
| 55       |              |          |              |          | 17.88        | 40.53    | 11.24        | 13.10    | 8.58         | 6.80     | 5.49         | 2.29     | 3.75         | 0.90     | 2.53         | 0.35     | 1.53         | 0.10     | 0.71         | 0.02     |
| 60       |              |          |              |          | 19.50        | 47.61    | 12.26        | 15.38    | 9.36         | 7.99     | 5.99         | 2.69     | 4.09         | 1.06     | 2.76         | 0.41     | 1.67         | 0.12     | 0.77         | 0.02     |
| 65       |              |          |              |          |              |          | 13.28        | 17.84    | 10.14        | 9.26     | 6.49         | 3.12     | 4.43         | 1.23     | 2.99         | 0.47     | 1.81         | 0.14     | 0.83         | 0.02     |
| 70       |              |          |              |          |              |          | 14.30        | 20.46    | 10.92        | 10.62    | 6.99         | 3.58     | 4.77         | 1.41     | 3.22         | 0.54     | 1.95         | 0.16     | 0.90         | 0.02     |
| 75       |              |          |              |          |              |          | 15.32        | 23.25    | 11.70        | 12.07    | 7.49         | 4.07     | 5.11         | 1.61     | 3.45         | 0.62     | 2.08         | 0.18     | 0.96         | 0.03     |
| 80       |              |          |              |          |              |          | 16.34        | 26.19    | 12.48        | 13.60    | 7.99         | 4.59     | 5.45         | 1.81     | 3.68         | 0.69     | 2.22         | 0.20     | 1.03         | 0.03     |
| 85       |              |          |              |          |              |          | 17.37        | 29.30    | 13.26        | 15.21    | 8.48         | 5.13     | 5.79         | 2.02     | 3.90         | 0.78     | 2.36         | 0.23     | 1.09         | 0.03     |
| 90       |              |          |              |          |              |          | 18.39        | 32.57    | 14.04        | 16.91    | 8.98         | 5.70     | 6.13         | 2.25     | 4.13         | 0.86     | 2.50         | 0.25     | 1.15         | 0.04     |
| 95       |              |          |              |          |              |          | 19.41        | 36.00    | 14.82        | 18.69    | 9.48         | 6.30     | 6.47         | 2.49     | 4.36         | 0.95     | 2.64         | 0.28     | 1.22         | 0.04     |
| 100      |              |          |              |          |              |          |              |          | 15.60        | 20.55    | 9.98         | 6.93     | 6.81         | 2.73     | 4.59         | 1.05     | 2.78         | 0.31     | 1.28         | 0.05     |
| 110      |              |          |              |          |              |          |              |          | 17.16        | 24.51    | 10.98        | 8.27     | 7.49         | 3.26     | 5.05         | 1.25     | 3.06         | 0.37     | 1.41         | 0.06     |
| 120      |              |          |              |          |              |          |              |          | 18.72        | 28.79    | 11.98        | 9.71     | 8.17         | 3.83     | 5.51         | 1.47     | 3.33         | 0.43     | 1.54         | 0.07     |
| 130      |              |          |              |          |              |          |              |          |              |          | 12.98        | 11.26    | 8.85         | 4.44     | 5.97         | 1.70     | 3.61         | 0.50     | 1.67         | 0.08     |
| 140      |              |          |              |          |              |          |              |          |              |          | 13.97        | 12.91    | 9.54         | 5.10     | 6.43         | 1.95     | 3.89         | 0.58     | 1.80         | 0.09     |
| 150      |              |          |              |          |              |          |              |          |              |          | 14.97        | 14.67    | 10.22        | 5.79     | 6.89         | 2.22     | 4.17         | 0.65     | 1.92         | 0.10     |
| 160      |              |          |              |          |              |          |              |          |              |          | 15.97        | 16.53    | 10.90        | 6.52     | 7.35         | 2.50     | 4.45         | 0.74     | 2.05         | 0.11     |
| 170      |              |          |              |          |              |          |              |          |              |          | 16.97        | 18.49    | 11.58        | 7.30     | 7.81         | 2.80     | 4.72         | 0.82     | 2.18         | 0.13     |
| 180      |              |          |              |          |              |          |              |          |              |          | 17.97        | 20.56    | 12.26        | 8.11     | 8.27         | 3.11     | 5.00         | 0.92     | 2.31         | 0.14     |
| 190      |              |          |              |          |              |          |              |          |              |          | 18.97        | 22.72    | 12.94        | 8.97     | 8.73         | 3.44     | 5.28         | 1.01     | 2.44         | 0.15     |
| 200      |              |          |              |          |              |          |              |          |              |          | 19.96        | 24.98    | 13.62        | 9.86     | 9.19         | 3.78     | 5.56         | 1.11     | 2.57         | 0.17     |
| 225      |              |          |              |          |              |          |              |          |              |          |              |          | 15.32        | 12.26    | 10.34        | 4.70     | 6.25         | 1.38     | 2.89         | 0.21     |
| 250      |              |          |              |          |              |          |              |          |              |          |              |          | 17.03        | 14.90    | 11.48        | 5.71     | 6.95         | 1.68     | 3.21         | 0.26     |
| 275      |              |          |              |          |              |          |              |          |              |          |              |          | 18.73        | 17.77    | 12.63        | 6.82     | 7.64         | 2.01     | 3.53         | 0.31     |
| 300      |              |          |              |          |              |          |              |          |              |          |              |          |              |          | 13.78        | 8.01     | 8.34         | 2.36     | 3.85         | 0.36     |
| 325      |              |          |              |          |              |          |              |          |              |          |              |          |              |          | 14.93        | 9.28     | 9.03         | 2.73     | 4.17         | 0.42     |
| 350      |              |          |              |          |              |          |              |          |              |          |              |          |              |          | 16.08        | 10.65    | 9.73         | 3.14     | 4.49         | 0.48     |
| 375      |              |          |              |          |              |          |              |          |              |          |              |          |              |          | 17.23        | 12.10    | 10.42        | 3.56     | 4.81         | 0.54     |
| 400      |              |          |              |          |              |          |              |          |              |          |              |          |              |          | 18.38        | 13.63    | 11.12        | 4.01     | 5.13         | 0.61     |
| 425      |              |          |              |          |              |          |              |          |              |          |              |          |              |          | 19.52        | 15.25    | 11.81        | 4.49     | 5.45         | 0.68     |
| 450      |              |          |              |          |              |          |              |          |              |          |              |          |              |          |              |          | 12.51        | 4.99     | 5.77         | 0.76     |
| 475      |              |          |              |          |              |          |              |          |              |          |              |          |              |          |              |          | 13.20        | 5.52     | 6.09         | 0.84     |
| 500      |              |          |              |          |              |          |              |          |              |          |              |          |              |          |              |          | 13.89        | 6.07     | 6.41         | 0.92     |
| 550      |              |          |              |          |              |          |              |          |              |          |              |          |              |          |              |          | 15.28        | 7.23     | 7.06         | 1.10     |
| 600      |              |          |              |          |              |          |              |          |              |          |              |          |              |          |              |          | 16.67        | 8.50     | 7.70         | 1.30     |

Note: Dark shaded area of chart indicates velocities over 5' per second. Use with caution

Velocity of flow values are computed from the general equation  $V = 408 \sqrt[0.8]{h_f}$

Friction pressure loss values are computed from the equation:  $[h_f = 0.2083 \left(\frac{100}{C}\right)^{1.852} \frac{Q^{1.852}}{d^{4.866}}] \times 4.33$  for psi loss per 100' of pipe