

| Pipe Size | O.D. in Inches | 5S            | 5             | 10S           | 10            |               |               |               | 20            |  | 30            | 40S & Std.    | 40            |               | 60            | 80S & XH      | 80            | 100           | 120           | 140             | 160             | XXH             |               |
|-----------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|-----------------|-----------------|---------------|
| 1/8       | .405           |               | .035<br>.14   | .049<br>.19   | .049<br>.19   |               |               |               |               |  |               | .068<br>.25   | .068<br>.25   |               |               | .095<br>.31   | .095<br>.31   |               |               |                 |                 |                 |               |
| 1/4       | .540           |               | .049          | .065          | .065          |               |               |               |               |  |               | .088<br>.43   | .088<br>.43   |               |               | .119<br>.54   | .119<br>.54   |               |               |                 |                 |                 |               |
| 3/8       | .675           |               | .049<br>.33   | .065          | .065          |               |               |               |               |  |               | .091<br>.57   | .091<br>.57   |               |               | .126<br>.74   | .126<br>.74   |               |               |                 |                 |                 |               |
| 1/2       | .840           | .065<br>.54   | .065<br>.54   | .083<br>.67   | .083<br>.67   |               |               |               |               |  |               | .109<br>.85   | .109<br>.85   |               |               | .147<br>1.09  | .147<br>1.09  |               |               |                 |                 | .188<br>1.31    | .294<br>1.72  |
| 3/4       | 1.050          | .065<br>.68   | .065<br>.68   | .083<br>.86   | .083<br>.86   |               |               |               |               |  |               | .113<br>1.13  | .113<br>1.13  |               |               | .154<br>1.48  | .154<br>1.48  |               |               |                 |                 | .219<br>1.95    | .308<br>2.44  |
| 1         | 1.315          | .065<br>.87   | .065<br>.87   | .109<br>1.41  | .109<br>1.41  |               |               |               |               |  |               | .133<br>1.68  | .133<br>1.68  |               |               | .179<br>2.17  | .179<br>2.17  |               |               |                 |                 | .250<br>2.85    | .358<br>3.66  |
| 1 1/4     | 1.660          | .065<br>1.11  | .065<br>1.11  | .109<br>1.81  | .109<br>1.81  |               |               |               |               |  |               | .140<br>2.27  | .140<br>2.27  |               |               | .191<br>3.00  | .191<br>3.00  |               |               |                 |                 | .250<br>3.77    | .382<br>5.22  |
| 1 1/2     | 1.900          | .065<br>1.28  | .065<br>1.28  | .109<br>2.09  | .109<br>2.09  |               |               |               |               |  |               | .145<br>2.72  | .145<br>2.72  |               |               | .200<br>3.63  | .200<br>3.63  |               |               |                 |                 | .281<br>4.86    | .400<br>6.41  |
| 2         | 2.375          | .065<br>1.61  | .065<br>1.61  | .109<br>2.64  | .109<br>2.64  |               |               |               |               |  |               | .154<br>3.66  | .154<br>3.66  |               |               | .218<br>5.03  | .218<br>5.03  |               |               |                 |                 | .344<br>7.47    | .436<br>9.04  |
| 2 1/2     | 2.875          | .083<br>2.48  | .083<br>2.48  | .120<br>3.53  | .120<br>3.53  |               |               |               |               |  |               | .203<br>5.80  | .203<br>5.80  |               |               | .276<br>7.67  | .276<br>7.67  |               |               |                 |                 | .375<br>10.02   | .552<br>13.71 |
| 3         | 3.500          | .083<br>3.03  | .083<br>3.03  | .120<br>4.34  | .120<br>4.34  | .156<br>5.58  | .188<br>6.66  |               |               |  |               | .216<br>7.58  | .216<br>7.58  |               | .26           | .300<br>10.26 |               |               |               |                 | .438<br>14.34   | .600<br>18.60   |               |
| 3 1/2     | 4.000          | .083<br>3.48  | .083<br>3.48  | .120<br>4.98  | .120<br>4.98  |               |               |               |               |  |               | .226<br>9.12  | .226<br>9.12  |               |               | .318<br>12.52 | .318<br>12.52 |               |               |                 |                 |                 | .636<br>22.87 |
| 4         | 4.500          | .083<br>3.92  | .083<br>3.92  | .120<br>5.62  | .120<br>5.62  | .156<br>7.24  | .188<br>8.67  |               |               |  |               | .237<br>10.80 | .237<br>10.80 |               | .281<br>12.67 | .337<br>15.00 | .337<br>15.00 |               | .438<br>19.02 |                 |                 | .531<br>22.53   | .674<br>27.57 |
| 4 1/2     | 5.000          |               |               |               |               |               |               |               |               |  |               | .247<br>12.55 |               |               |               | .355<br>17.63 |               |               |               |                 |                 |                 | .710<br>32.53 |
| 5         | 5.563          | .109<br>6.35  | .109<br>6.35  | .134<br>7.78  | .134<br>7.78  |               |               |               | .203<br>11.63 |  |               | .258<br>14.63 | .258<br>14.63 |               |               | .375<br>20.80 | .375<br>20.80 |               | .500<br>27.06 |                 |                 | .625<br>32.99   | .750<br>38.59 |
| 6         | 6.625          | .109<br>7.59  | .109<br>7.59  | .134<br>9.30  | .134<br>9.30  | .156<br>10.79 | .188<br>12.94 |               | .203<br>13.94 |  |               | .280<br>18.99 | .280<br>18.99 | .375<br>25.05 |               | .432<br>28.60 | .432<br>28.60 |               | .562<br>36.43 |                 |                 | .719<br>45.39   | .864<br>53.21 |
| 7         | 7.625          |               |               |               |               |               |               |               |               |  |               | .301<br>23.57 |               |               |               | .500<br>38.08 |               |               |               |                 |                 |                 | .875<br>63.14 |
| 8         | 8.625          | .109<br>9.92  | .109<br>9.92  | .148<br>13.41 | .148<br>13.41 | .156<br>14.12 | .188<br>16.96 | .219<br>19.68 | .250<br>22.38 |  | .277<br>24.72 | .322<br>28.58 | .322<br>28.58 | .375<br>33.07 | .406<br>35.67 | .500<br>43.43 | .500<br>43.43 | .594<br>51.00 | .719<br>60.77 | .812<br>67.82   | .906<br>74.76   | .875<br>72.49   |               |
| 9         | 9.625          |               |               |               |               |               |               |               |               |  |               | .342<br>33.94 |               |               |               | .500<br>48.77 |               |               |               |                 |                 |                 |               |
| 10        | 10.750         | .134<br>15.21 | .134<br>15.21 | .165<br>18.67 | .165<br>18.67 | .188<br>21.23 | .219<br>24.65 |               | .250<br>28.06 |  | .307<br>34.27 | .365<br>40.52 | .365<br>40.52 |               | .500<br>54.79 | .500<br>54.79 | .594<br>64.49 | .719<br>77.10 | .844<br>89.38 | 1.000<br>104.23 | 1.125<br>115.75 | 1.000<br>104.23 |               |
| 11        | 11.750         |               |               |               |               |               |               |               |               |  |               | .375<br>45.60 |               |               |               | .500<br>60.13 |               |               |               |                 |                 |                 |               |

|    |        |               |               |               |                |               |               |  |                |               |                |                |                |                |                |                |                 |                 |                 |                 |                 |                 |
|----|--------|---------------|---------------|---------------|----------------|---------------|---------------|--|----------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 12 | 12.750 | .156<br>21.00 | .165<br>22.20 | .180<br>24.19 | .180           | .188<br>25.25 | .219<br>29.34 |  | .250<br>33.41  | .281<br>37.46 | .330<br>43.81  | .375<br>49.61  | .406<br>53.57  |                | .562<br>73.22  | .500<br>65.48  | .688<br>88.71   | .844<br>107.42  | 1.000<br>125.61 | 1.125<br>139.81 | 1.312<br>160.42 | 1.000<br>125.61 |
| 14 | 14.000 | .156<br>23.09 |               | .188<br>27.76 | .250<br>36.75  |               |               |  | .312<br>45.65  |               | .375<br>54.62  | .375<br>54.62  | .438<br>63.50  |                | .594<br>85.13  | .500<br>72.16  | .750<br>106.23  | .938<br>130.98  | 1.094<br>150.93 | 1.250<br>170.37 | 1.406<br>189.29 |                 |
| 16 | 16.000 | .165<br>27.93 |               | .188<br>31.78 | .250           | .188<br>31.78 | .219<br>36.95 |  | .312<br>52.32  | .281<br>47.22 | .375<br>62.64  | .375<br>62.64  | .500<br>82.85  | .625<br>102.72 | .656<br>107.60 | .500<br>82.85  | .844<br>136.74  | 1.031<br>164.98 | 1.219<br>192.61 | 1.438<br>223.85 | 1.594<br>245.48 |                 |
| 18 | 18.000 | .165<br>31.46 |               | .188<br>35.80 | .250<br>47.44  |               |               |  | .312<br>58.99  |               | .438<br>82.23  | .375<br>70.65  | .562<br>104.76 | .625<br>116.09 | .750<br>138.30 | .500<br>93.54  | .938<br>171.08  | 1.156<br>208.15 | 1.375<br>244.37 | 1.562<br>274.48 | 1.781<br>308.79 |                 |
| 20 | 20.000 | .188<br>39.82 |               | .219<br>46.31 | .250<br>52.78  |               |               |  | .375<br>78.67  |               | .500<br>104.23 | .375<br>78.67  | .594<br>123.23 | .625<br>129.45 | .812<br>166.56 | .500<br>104.23 | 1.031<br>209.06 | 1.281<br>256.34 | 1.500<br>296.65 | 1.750<br>341.41 | 1.969<br>379.53 |                 |
| 22 | 22.000 |               |               |               | .250<br>58.13  |               |               |  | .375<br>86.69  |               | .500<br>114.92 | .375<br>86.69  |                |                | .875<br>197.60 | .500<br>114.92 | 1.125<br>251.05 | 1.375<br>303.16 | 1.625<br>353.94 | 1.875<br>403.38 | 2.215<br>451.49 |                 |
| 24 | 24.000 | .219<br>55.67 |               | .250<br>63.47 | .250<br>63.47  |               |               |  | .375<br>94.71  |               | .562<br>140.81 | .375<br>94.71  | .688<br>171.45 | .750<br>186.41 | .969<br>238.57 | .500<br>125.61 | 1.219<br>296.86 | 1.531<br>367.74 | 1.812<br>429.79 | 2.062<br>483.57 | 2.344<br>542.64 |                 |
| 26 | 26.000 |               |               |               | .312<br>85.68  |               |               |  | .500<br>136.30 |               |                | .375<br>102.72 |                |                |                | .500<br>136.30 |                 |                 |                 |                 |                 |                 |
| 28 | 28.000 |               |               |               | .312<br>92.35  |               |               |  | .500<br>146.99 |               | .625<br>182.90 | .375<br>110.74 |                |                |                |                |                 |                 |                 |                 |                 |                 |
| 30 | 30.000 | .250<br>79.51 |               | .312<br>99.02 | .312<br>99.02  |               |               |  | .500<br>157.68 |               | .625<br>196.26 | .375<br>118.76 |                | .750<br>234.51 |                | .500<br>157.68 |                 |                 |                 |                 |                 |                 |
| 32 | 32.000 |               |               |               | .312<br>105.69 |               |               |  | .500<br>168.37 |               | .625<br>209.62 | .375<br>126.78 | .688<br>230.29 |                |                | .500<br>168.37 |                 |                 |                 |                 |                 |                 |
| 34 | 34.000 |               |               |               | .312<br>112.36 |               |               |  | .500<br>179.06 |               | .625<br>222.99 | .375<br>134.79 | .688<br>245.00 |                |                | .500<br>179.06 |                 |                 |                 |                 |                 |                 |
| 36 | 36.000 |               |               |               | .312<br>119.03 |               |               |  | .500<br>189.75 |               | .625<br>236.35 | .375<br>142.81 | .750<br>282.62 |                |                | .500<br>189.75 |                 |                 |                 |                 |                 |                 |
| 42 | 42.000 |               |               |               |                |               |               |  |                |               | .375<br>166.86 |                |                |                | .500<br>221.82 |                |                 |                 |                 |                 |                 |                 |
| 48 | 48.000 |               |               |               |                |               |               |  |                |               | .375<br>190.92 |                |                |                | .500<br>253.89 |                |                 |                 |                 |                 |                 |                 |