

# INSTAFLEX (10°C)

## Pressure loss chart for INSTAFLEX PB pipes d16-d225

Pipe friction loss in relation to flow rate

### Basis of calculation

|                                 |                            |
|---------------------------------|----------------------------|
| Water temperature $\vartheta_k$ | = 10°C                     |
| Surface roughness $k$           | = 0.007 mm                 |
| Viscosity $\eta$                | = 0.00131 Pa·s             |
| Density $\rho$                  | = 999.70 kg/m <sup>3</sup> |

### Recommended flow velocity according SVGW guideline W3/2013

- max. 4.0 m/s for single outlet lines
- max. 3.0 m/s for apparatus lines
- max. 3.0 m/s for floor distribution lines
- max. 2.0 m/s for distribution lines

## Diagramme des pertes de charge dans les tuyaux INSTAFLEX PB d/16-d225

Perte de charge par frottement dépendant du débit volumique

### Base de calcul

|                                 |                            |
|---------------------------------|----------------------------|
| Température d'eau $\vartheta_k$ | = 10°C                     |
| Rugosité des parois $k$         | = 0.007 mm                 |
| Viscosité $\eta$                | = 0.00131 Pa·s             |
| Densité $\rho$                  | = 999.70 kg/m <sup>3</sup> |

### Débit recommandé pour la politique SSIGE W3/2013

- max. 4.0 m/s pour conduite d'évacuation
- max. 3.0 m/s pour groupe d'appareils
- max. 3.0 m/s pour distribution d'étage
- max. 2.0 m/s pour conduite de distribution

## Diagramma della perdita di carico per tubi sintetici INSTAFLEX PB d16-d225

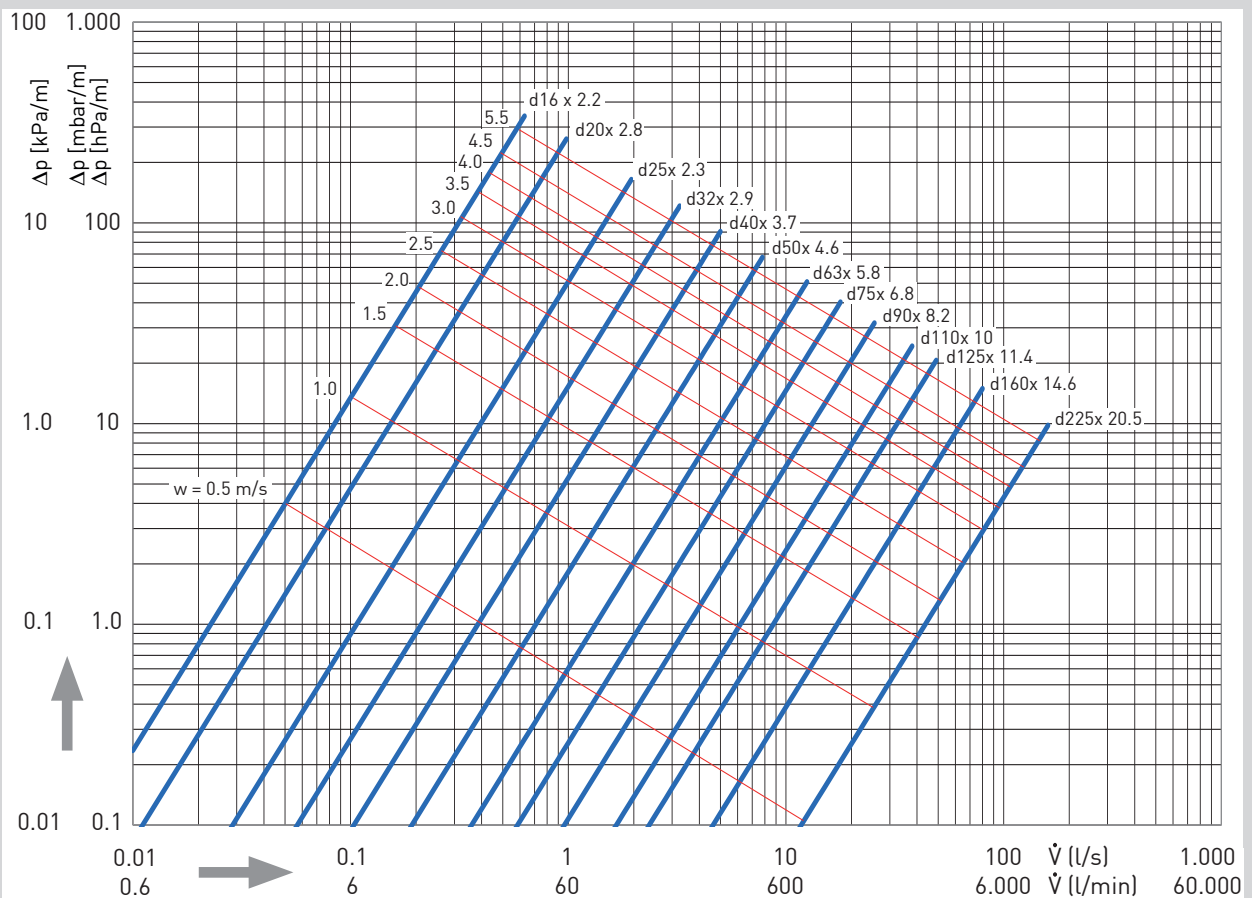
Caduta di pressione per attrito del tubo a dipendenza del flusso volumetrico

### Base di calcolo

|                                   |                            |
|-----------------------------------|----------------------------|
| Temperatura d'acqua $\vartheta_k$ | = 10°C                     |
| Rugosità del tubo $k$             | = 0.007 mm                 |
| Viscosità $\eta$                  | = 0.00131 Pa·s             |
| Densità $\rho$                    | = 999.70 kg/m <sup>3</sup> |

### Portata consigliata dal SSIGA politica W3/2013

- max. 4.0 m/s per linee di getto
- max. 3.0 m/s per gruppi di apparecchiature
- max. 3.0 m/s per linee di piano
- max. 2.0 m/s per linee di distribuzione



## Correction factor values with different water temperatures / Facteurs de correction pour d'autres températures

### Fattore di correzione per varie temperature

| $\vartheta_w$ (°C) | 10    | 20    | 30    | 40    | 50    | 60    | 70    | 80    | 90    | 95    |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| f                  | 1.000 | 0.955 | 0.915 | 0.870 | 0.835 | 0.805 | 0.775 | 0.753 | 0.737 | 0.730 |

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| d <sub>1</sub> x s | 16 x 2.2 |         | 20 x 2.8 |         | 25 x 2.3 |         | 32 x 2.9 |         | 40 x 3.7 |         | 50 x 4.6 |         | 63 x 5.8 |         |
|--------------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| d <sub>2</sub>     | 11.6     |         | 14.4     |         | 20.4     |         | 26.2     |         | 32.6     |         | 40.8     |         | 51.4     |         |
| Vs                 | v        | R       | v        | R       | v        | R       | v        | R       | v        | R       | v        | R       | v        | R       |
| [l/s]              | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] |
| 0.01               | 0.1      | 0.2     | 0.1      | 0.1     |          |         |          |         |          |         |          |         |          |         |
| 0.02               | 0.2      | 0.8     | 0.1      | 0.3     |          |         |          |         |          |         |          |         |          |         |
| 0.03               | 0.3      | 1.6     | 0.2      | 0.6     | 0.1      | 0.1     |          |         |          |         |          |         |          |         |
| 0.04               | 0.4      | 2.7     | 0.2      | 1.0     | 0.1      | 0.2     |          |         |          |         |          |         |          |         |
| 0.05               | 0.5      | 4.0     | 0.3      | 1.4     | 0.2      | 0.3     |          |         |          |         |          |         |          |         |
| 0.06               | 0.6      | 5.5     | 0.4      | 1.9     | 0.2      | 0.4     |          |         |          |         |          |         |          |         |
| 0.07               | 0.7      | 7.2     | 0.4      | 2.5     | 0.2      | 0.5     | 0.1      | 0.1     |          |         |          |         |          |         |
| 0.08               | 0.8      | 9.1     | 0.5      | 3.2     | 0.2      | 0.6     | 0.1      | 0.2     |          |         |          |         |          |         |
| 0.09               | 0.9      | 11.2    | 0.6      | 4.0     | 0.3      | 0.7     | 0.2      | 0.2     |          |         |          |         |          |         |
| 0.10               | 1.0      | 13.7    | 0.6      | 4.8     | 0.3      | 0.9     | 0.2      | 0.3     | 0.1      | 0.1     |          |         |          |         |
| 0.15               | 1.4      | 27.4    | 0.9      | 9.7     | 0.5      | 1.8     | 0.3      | 0.5     | 0.2      | 0.2     |          |         |          |         |
| 0.20               | 1.9      | 45.3    | 1.2      | 16.1    | 0.6      | 3.0     | 0.4      | 0.9     | 0.2      | 0.3     | 0.2      | 0.1     |          |         |
| 0.25               | 2.4      | 67.1    | 1.5      | 23.8    | 0.8      | 4.5     | 0.5      | 1.3     | 0.3      | 0.5     | 0.2      | 0.2     |          |         |
| 0.30               | 2.8      | 92.4    | 1.8      | 32.7    | 0.9      | 6.1     | 0.6      | 1.8     | 0.4      | 0.6     | 0.2      | 0.2     |          |         |
| 0.35               | 3.3      | 121.1   | 2.1      | 42.9    | 1.1      | 8.1     | 0.6      | 2.4     | 0.4      | 0.8     | 0.3      | 0.3     |          |         |
| 0.40               | 3.8      | 153.1   | 2.5      | 54.2    | 1.2      | 10.2    | 0.7      | 3.1     | 0.5      | 1.1     | 0.3      | 0.4     |          |         |
| 0.45               | 4.3      | 188.3   | 2.8      | 66.7    | 1.4      | 12.5    | 0.8      | 3.8     | 0.5      | 1.3     | 0.3      | 0.4     | 0.2      | 0.1     |
| 0.50               | 4.7      | 226.6   | 3.1      | 80.2    | 1.5      | 15.1    | 0.9      | 4.5     | 0.6      | 1.6     | 0.4      | 0.5     | 0.2      | 0.2     |
| 0.55               | 5.2      | 267.9   | 3.4      | 94.9    | 1.7      | 17.8    | 1.0      | 5.4     | 0.7      | 1.9     | 0.4      | 0.6     | 0.3      | 0.2     |
| 0.58               | 5.5      | 294.1   | 3.6      | 104.1   | 1.8      | 19.6    | 1.1      | 5.9     | 0.7      | 2.1     | 0.4      | 0.7     | 0.3      | 0.2     |
| 0.65               |          |         | 4.0      | 127.2   | 2.0      | 23.9    | 1.2      | 7.2     | 0.8      | 2.5     | 0.5      | 0.9     | 0.3      | 0.3     |
| 0.70               |          |         | 4.3      | 144.9   | 2.1      | 27.2    | 1.3      | 8.2     | 0.8      | 2.9     | 0.5      | 1.0     | 0.3      | 0.3     |
| 0.75               |          |         | 4.6      | 163.5   | 2.3      | 30.7    | 1.4      | 9.2     | 0.9      | 3.2     | 0.6      | 1.1     | 0.4      | 0.4     |
| 0.80               |          |         | 4.9      | 183.1   | 2.4      | 34.4    | 1.5      | 10.3    | 1.0      | 3.6     | 0.6      | 1.2     | 0.4      | 0.4     |
| 0.85               |          |         | 5.2      | 203.7   | 2.6      | 38.3    | 1.6      | 11.5    | 1.0      | 4.0     | 0.7      | 1.4     | 0.4      | 0.5     |
| 0.90               |          |         | 5.5      | 225.2   | 2.8      | 42.3    | 1.7      | 12.7    | 1.1      | 4.5     | 0.7      | 1.5     | 0.4      | 0.5     |
| 0.95               |          |         |          |         | 2.9      | 46.5    | 1.8      | 14.0    | 1.1      | 4.9     | 0.7      | 1.7     | 0.5      | 0.6     |
| 1.00               |          |         |          |         | 3.1      | 50.9    | 1.9      | 15.3    | 1.2      | 5.4     | 0.8      | 1.8     | 0.5      | 0.6     |
| 1.10               |          |         |          |         | 3.4      | 60.2    | 2.0      | 18.1    | 1.3      | 6.3     | 0.8      | 2.2     | 0.5      | 0.7     |
| 1.20               |          |         |          |         | 3.7      | 70.1    | 2.2      | 21.1    | 1.4      | 7.4     | 0.9      | 2.5     | 0.6      | 0.8     |
| 1.30               |          |         |          |         | 4.0      | 80.7    | 2.4      | 24.3    | 1.6      | 8.5     | 1.0      | 2.9     | 0.6      | 1.0     |
| 1.40               |          |         |          |         | 4.3      | 91.9    | 2.6      | 27.6    | 1.7      | 9.7     | 1.1      | 3.3     | 0.7      | 1.1     |
| 1.50               |          |         |          |         | 4.6      | 103.7   | 2.8      | 31.2    | 1.8      | 10.9    | 1.1      | 3.7     | 0.7      | 1.2     |
| 1.60               |          |         |          |         | 4.9      | 116.2   | 3.0      | 34.9    | 1.9      | 12.2    | 1.2      | 4.2     | 0.8      | 1.4     |
| 1.70               |          |         |          |         | 5.2      | 129.2   | 3.2      | 38.9    | 2.0      | 13.6    | 1.3      | 4.6     | 0.8      | 1.5     |
| 1.80               |          |         |          |         | 5.5      | 142.9   | 3.3      | 43.0    | 2.2      | 15.0    | 1.4      | 5.1     | 0.9      | 1.7     |
| 1.90               |          |         |          |         |          |         | 3.5      | 47.2    | 2.3      | 16.5    | 1.5      | 5.6     | 0.9      | 1.9     |
| 2.00               |          |         |          |         |          |         | 3.7      | 51.7    | 2.4      | 18.1    | 1.5      | 6.2     | 1.0      | 2.0     |
| 2.10               |          |         |          |         |          |         | 3.9      | 56.3    | 2.5      | 19.7    | 1.6      | 6.7     | 1.0      | 2.2     |
| 2.20               |          |         |          |         |          |         | 4.1      | 61.1    | 2.6      | 21.4    | 1.7      | 7.3     | 1.1      | 2.4     |
| 2.30               |          |         |          |         |          |         | 4.3      | 66.1    | 2.8      | 23.1    | 1.8      | 7.9     | 1.1      | 2.6     |
| 2.40               |          |         |          |         |          |         | 4.5      | 71.2    | 2.9      | 24.9    | 1.8      | 8.5     | 1.2      | 2.8     |
| 2.50               |          |         |          |         |          |         | 4.6      | 76.5    | 3.0      | 26.8    | 1.9      | 9.1     | 1.2      | 3.0     |
| 2.60               |          |         |          |         |          |         | 4.8      | 82.0    | 3.1      | 28.7    | 2.0      | 9.8     | 1.3      | 3.2     |
| 2.70               |          |         |          |         |          |         | 5.0      | 87.6    | 3.2      | 30.7    | 2.1      | 10.4    | 1.3      | 3.4     |
| 2.80               |          |         |          |         |          |         | 5.2      | 93.3    | 3.4      | 32.7    | 2.1      | 11.1    | 1.3      | 3.7     |
| 2.95               |          |         |          |         |          |         | 5.5      | 102.3   | 3.5      | 35.8    | 2.3      | 12.2    | 1.4      | 4.0     |
| 3.00               |          |         |          |         |          |         |          |         | 3.6      | 36.9    | 2.3      | 12.6    | 1.4      | 4.1     |
| 3.10               |          |         |          |         |          |         |          |         | 3.7      | 39.1    | 2.4      | 13.3    | 1.5      | 4.4     |
| 3.20               |          |         |          |         |          |         |          |         | 3.8      | 41.3    | 2.4      | 14.1    | 1.5      | 4.6     |

# INSTAFLEX (10°C)

| d <sub>1</sub> x s | 16 x 2.2 |         | 20 x 2.8 |         | 25 x 2.3 |         | 32 x 2.9 |         | 40 x 3.7 |         | 50 x 4.6 |         | 63 x 5.8 |         |
|--------------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| d <sub>2</sub>     | 11.6     |         | 14.4     |         | 20.4     |         | 26.2     |         | 32.6     |         | 40.8     |         | 51.4     |         |
| V <sub>s</sub>     | v        | R       | v        | R       | v        | R       | v        | R       | v        | R       | v        | R       | v        | R       |
| [[l/s]             | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] |
| 3.30               |          |         |          |         |          |         |          |         | 4.0      | 43.6    | 2.5      | 14.9    | 1.6      | 4.9     |
| 3.40               |          |         |          |         |          |         |          |         | 4.1      | 46.0    | 2.6      | 15.7    | 1.6      | 5.2     |
| 3.50               |          |         |          |         |          |         |          |         | 4.2      | 48.4    | 2.7      | 16.5    | 1.7      | 5.4     |
| 3.60               |          |         |          |         |          |         |          |         | 4.3      | 50.8    | 2.8      | 17.3    | 1.7      | 5.7     |
| 3.70               |          |         |          |         |          |         |          |         | 4.4      | 53.3    | 2.8      | 18.2    | 1.8      | 6.0     |
| 3.80               |          |         |          |         |          |         |          |         | 4.6      | 55.9    | 2.9      | 19.0    | 1.8      | 6.3     |
| 3.90               |          |         |          |         |          |         |          |         | 4.7      | 58.5    | 3.0      | 19.9    | 1.9      | 6.6     |
| 4.00               |          |         |          |         |          |         |          |         | 4.8      | 61.1    | 3.1      | 20.8    | 1.9      | 6.9     |
| 4.10               |          |         |          |         |          |         |          |         | 4.9      | 63.9    | 3.1      | 21.7    | 2.0      | 7.2     |
| 4.20               |          |         |          |         |          |         |          |         | 5.0      | 66.6    | 3.2      | 22.7    | 2.0      | 7.5     |
| 4.30               |          |         |          |         |          |         |          |         | 5.2      | 69.4    | 3.3      | 23.6    | 2.1      | 7.8     |
| 4.40               |          |         |          |         |          |         |          |         | 5.3      | 72.3    | 3.4      | 24.6    | 2.1      | 8.1     |
| 4.50               |          |         |          |         |          |         |          |         | 5.4      | 75.2    | 3.4      | 25.6    | 2.2      | 8.4     |
| 4.60               |          |         |          |         |          |         |          |         | 5.5      | 78.1    | 3.5      | 26.6    | 2.2      | 8.8     |
| 4.70               |          |         |          |         |          |         |          |         |          |         | 3.6      | 27.6    | 2.3      | 9.1     |
| 4.80               |          |         |          |         |          |         |          |         |          |         | 3.7      | 28.7    | 2.3      | 9.5     |
| 4.90               |          |         |          |         |          |         |          |         |          |         | 3.7      | 29.7    | 2.4      | 9.8     |
| 5.00               |          |         |          |         |          |         |          |         |          |         | 3.8      | 30.8    | 2.4      | 10.2    |
| 5.20               |          |         |          |         |          |         |          |         |          |         | 4.0      | 33.0    | 2.5      | 10.9    |
| 5.40               |          |         |          |         |          |         |          |         |          |         | 4.1      | 35.3    | 2.6      | 11.6    |
| 5.60               |          |         |          |         |          |         |          |         |          |         | 4.3      | 37.6    | 2.7      | 12.4    |
| 5.80               |          |         |          |         |          |         |          |         |          |         | 4.4      | 40.0    | 2.8      | 13.2    |
| 6.00               |          |         |          |         |          |         |          |         |          |         | 4.6      | 42.4    | 2.9      | 14.0    |
| 6.20               |          |         |          |         |          |         |          |         |          |         | 4.7      | 44.9    | 3.0      | 14.8    |
| 6.40               |          |         |          |         |          |         |          |         |          |         | 4.9      | 47.5    | 3.1      | 15.7    |
| 6.60               |          |         |          |         |          |         |          |         |          |         | 5.0      | 50.2    | 3.2      | 16.6    |
| 6.80               |          |         |          |         |          |         |          |         |          |         | 5.2      | 52.9    | 3.3      | 17.4    |
| 7.00               |          |         |          |         |          |         |          |         |          |         |          |         | 3.4      | 18.4    |
| 7.20               |          |         |          |         |          |         |          |         |          |         |          |         | 3.5      | 19.3    |
| 7.40               |          |         |          |         |          |         |          |         |          |         |          |         | 3.6      | 20.2    |
| 7.60               |          |         |          |         |          |         |          |         |          |         |          |         | 3.7      | 21.2    |
| 7.80               |          |         |          |         |          |         |          |         |          |         |          |         | 3.8      | 22.2    |
| 8.00               |          |         |          |         |          |         |          |         |          |         |          |         | 3.9      | 23.2    |
| 8.20               |          |         |          |         |          |         |          |         |          |         |          |         | 4.0      | 24.2    |
| 8.40               |          |         |          |         |          |         |          |         |          |         |          |         | 4.0      | 25.3    |
| 8.60               |          |         |          |         |          |         |          |         |          |         |          |         | 4.1      | 26.3    |
| 8.80               |          |         |          |         |          |         |          |         |          |         |          |         | 4.2      | 27.4    |
| 9.00               |          |         |          |         |          |         |          |         |          |         |          |         | 4.3      | 28.5    |
| 9.25               |          |         |          |         |          |         |          |         |          |         |          |         | 4.5      | 29.9    |
| 9.50               |          |         |          |         |          |         |          |         |          |         |          |         | 4.6      | 31.4    |
| 9.75               |          |         |          |         |          |         |          |         |          |         |          |         | 4.7      | 32.8    |
| 10.00              |          |         |          |         |          |         |          |         |          |         |          |         | 4.8      | 34.3    |
| 10.25              |          |         |          |         |          |         |          |         |          |         |          |         | 4.9      | 35.8    |
| 10.50              |          |         |          |         |          |         |          |         |          |         |          |         | 5.1      | 37.4    |
| 10.75              |          |         |          |         |          |         |          |         |          |         |          |         | 5.2      | 39.0    |
| 11.00              |          |         |          |         |          |         |          |         |          |         |          |         | 5.3      | 40.6    |
| 11.25              |          |         |          |         |          |         |          |         |          |         |          |         | 5.4      | 42.2    |
| 11.50              |          |         |          |         |          |         |          |         |          |         |          |         | 5.5      | 43.9    |

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| d <sub>1</sub> x s | 75 x 6.8 |         | 90 x 8.2 |         | 110 x 10 |         | 125 x 11.4 |         | 160 x 14.6 |         | 225 x 20.5 |         |
|--------------------|----------|---------|----------|---------|----------|---------|------------|---------|------------|---------|------------|---------|
| d <sub>2</sub>     | 61.4     |         | 73.6     |         | 90.0     |         | 102.2      |         | 130.8      |         | 184.0      |         |
| V <sub>s</sub>     | v        | R       | v        | R       | v        | R       | v          | R       | v          | R       | v          | R       |
| [l/s]              | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] | [m/s]    | [hPa/m] | [m/s]      | [hPa/m] | [m/s]      | [hPa/m] | [m/s]      | [hPa/m] |
| 0.40               | 0.1      | 0.1     |          |         |          |         |            |         |            |         |            |         |
| 0.45               | 0.2      | 0.1     |          |         |          |         |            |         |            |         |            |         |
| 0.50               | 0.2      | 0.1     |          |         |          |         |            |         |            |         |            |         |
| 0.55               | 0.2      | 0.1     |          |         |          |         |            |         |            |         |            |         |
| 0.60               | 0.2      | 0.1     | 0.1      | 0.0     |          |         |            |         |            |         |            |         |
| 0.65               | 0.2      | 0.1     | 0.2      | 0.1     |          |         |            |         |            |         |            |         |
| 0.70               | 0.2      | 0.1     | 0.2      | 0.1     |          |         |            |         |            |         |            |         |
| 0.75               | 0.3      | 0.2     | 0.2      | 0.1     |          |         |            |         |            |         |            |         |
| 0.80               | 0.3      | 0.2     | 0.2      | 0.1     |          |         |            |         |            |         |            |         |
| 0.85               | 0.3      | 0.2     | 0.2      | 0.1     |          |         |            |         |            |         |            |         |
| 0.90               | 0.3      | 0.2     | 0.2      | 0.1     |          |         |            |         |            |         |            |         |
| 0.95               | 0.3      | 0.2     | 0.2      | 0.1     |          |         |            |         |            |         |            |         |
| 1.00               | 0.3      | 0.3     | 0.2      | 0.1     |          |         |            |         |            |         |            |         |
| 1.10               | 0.4      | 0.3     | 0.3      | 0.1     | 0.2      | 0.0     |            |         |            |         |            |         |
| 1.20               | 0.4      | 0.4     | 0.3      | 0.1     | 0.2      | 0.1     |            |         |            |         |            |         |
| 1.30               | 0.4      | 0.4     | 0.3      | 0.2     | 0.2      | 0.1     |            |         |            |         |            |         |
| 1.40               | 0.5      | 0.5     | 0.3      | 0.2     | 0.2      | 0.1     |            |         |            |         |            |         |
| 1.50               | 0.5      | 0.5     | 0.4      | 0.2     | 0.2      | 0.1     | 0.2        | 0.0     |            |         |            |         |
| 1.60               | 0.5      | 0.6     | 0.4      | 0.2     | 0.3      | 0.1     | 0.2        | 0.1     |            |         |            |         |
| 1.70               | 0.6      | 0.7     | 0.4      | 0.3     | 0.3      | 0.1     | 0.2        | 0.1     |            |         |            |         |
| 1.80               | 0.6      | 0.7     | 0.4      | 0.3     | 0.3      | 0.1     | 0.2        | 0.1     |            |         |            |         |
| 1.90               | 0.6      | 0.8     | 0.4      | 0.3     | 0.3      | 0.1     | 0.2        | 0.1     |            |         |            |         |
| 2.00               | 0.7      | 0.9     | 0.5      | 0.4     | 0.3      | 0.1     | 0.2        | 0.1     |            |         |            |         |
| 2.20               | 0.7      | 1.0     | 0.5      | 0.4     | 0.3      | 0.2     | 0.3        | 0.1     |            |         |            |         |
| 2.40               | 0.8      | 1.2     | 0.6      | 0.5     | 0.4      | 0.2     | 0.3        | 0.1     |            |         |            |         |
| 2.60               | 0.9      | 1.4     | 0.6      | 0.6     | 0.4      | 0.2     | 0.3        | 0.1     |            |         |            |         |
| 2.80               | 0.9      | 1.6     | 0.7      | 0.7     | 0.4      | 0.2     | 0.3        | 0.1     |            |         |            |         |
| 3.00               | 1.0      | 1.8     | 0.7      | 0.7     | 0.5      | 0.3     | 0.4        | 0.2     | 0.2        | 0.0     |            |         |
| 3.20               | 1.1      | 2.0     | 0.8      | 0.8     | 0.5      | 0.3     | 0.4        | 0.2     | 0.2        | 0.1     |            |         |
| 3.40               | 1.1      | 2.2     | 0.8      | 0.9     | 0.5      | 0.4     | 0.4        | 0.2     | 0.3        | 0.1     |            |         |
| 3.60               | 1.2      | 2.4     | 0.8      | 1.0     | 0.6      | 0.4     | 0.4        | 0.2     | 0.3        | 0.1     |            |         |
| 3.80               | 1.3      | 2.7     | 0.9      | 1.1     | 0.6      | 0.4     | 0.5        | 0.2     | 0.3        | 0.1     |            |         |
| 4.00               | 1.4      | 2.9     | 0.9      | 1.2     | 0.6      | 0.5     | 0.5        | 0.3     | 0.3        | 0.1     |            |         |
| 4.50               | 1.5      | 3.6     | 1.1      | 1.5     | 0.7      | 0.6     | 0.5        | 0.3     | 0.3        | 0.1     |            |         |
| 5.00               | 1.7      | 4.3     | 1.2      | 1.8     | 0.8      | 0.7     | 0.6        | 0.4     | 0.4        | 0.1     |            |         |
| 5.50               | 1.9      | 5.1     | 1.3      | 2.1     | 0.9      | 0.8     | 0.7        | 0.4     | 0.4        | 0.1     |            |         |
| 6.00               | 2.0      | 6.0     | 1.4      | 2.5     | 0.9      | 1.0     | 0.7        | 0.5     | 0.4        | 0.2     |            |         |
| 6.50               | 2.2      | 6.9     | 1.5      | 2.9     | 1.0      | 1.1     | 0.8        | 0.6     | 0.5        | 0.2     |            |         |
| 7.00               | 2.4      | 7.8     | 1.6      | 3.3     | 1.1      | 1.2     | 0.9        | 0.7     | 0.5        | 0.2     |            |         |
| 7.50               | 2.5      | 8.8     | 1.8      | 3.7     | 1.2      | 1.4     | 0.9        | 0.8     | 0.6        | 0.2     | 0.3        | 0.0     |
| 8.00               | 2.7      | 9.9     | 1.9      | 4.1     | 1.3      | 1.6     | 1.0        | 0.9     | 0.6        | 0.3     | 0.3        | 0.1     |
| 8.50               | 2.9      | 11.0    | 2.0      | 4.6     | 1.3      | 1.8     | 1.0        | 1.0     | 0.6        | 0.3     | 0.3        | 0.1     |
| 9.00               | 3.0      | 12.2    | 2.1      | 5.1     | 1.4      | 1.9     | 1.1        | 1.1     | 0.7        | 0.3     | 0.3        | 0.1     |
| 9.50               | 3.2      | 13.4    | 2.2      | 5.6     | 1.5      | 2.1     | 1.2        | 1.2     | 0.7        | 0.4     | 0.4        | 0.1     |
| 10.0               | 3.4      | 14.6    | 2.4      | 6.1     | 1.6      | 2.3     | 1.2        | 1.3     | 0.7        | 0.4     | 0.4        | 0.1     |
| 11.0               | 3.7      | 17.3    | 2.6      | 7.2     | 1.7      | 2.8     | 1.3        | 1.5     | 0.8        | 0.5     | 0.4        | 0.1     |
| 12.0               | 4.1      | 20.1    | 2.8      | 8.4     | 1.9      | 3.2     | 1.5        | 1.7     | 0.9        | 0.5     | 0.5        | 0.1     |
| 13.0               | 4.4      | 23.2    | 3.1      | 9.7     | 2.0      | 3.7     | 1.6        | 2.0     | 1.0        | 0.6     | 0.5        | 0.1     |
| 14.0               | 4.7      | 26.4    | 3.3      | 11.1    | 2.2      | 4.2     | 1.7        | 2.3     | 1.0        | 0.7     | 0.5        | 0.1     |
| 15.0               | 5.1      | 29.8    | 3.5      | 12.5    | 2.4      | 4.8     | 1.8        | 2.6     | 1.1        | 0.8     | 0.6        | 0.2     |

