

### Slope Length - L (m)

| Horizontal Length | Rise (cm per m horizontal length) |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------------|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                   | 1                                 | 2      | 4      | 5      | 10     | 20     | 30     | 40     | 50     | 60     | 70     | 80     | 90     | 100    |
| - x -             | Conversion Factor                 |        |        |        |        |        |        |        |        |        |        |        |        |        |
| (m)               | 1.0000                            | 1.0002 | 1.0008 | 1.0012 | 1.0050 | 1.0198 | 1.0440 | 1.0770 | 1.1180 | 1.1662 | 1.2207 | 1.2806 | 1.3454 | 1.4142 |
| 1                 | 1.0                               | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.1    | 1.1    | 1.2    | 1.2    | 1.3    | 1.3    | 1.4    |
| 2                 | 2.0                               | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.1    | 2.2    | 2.2    | 2.3    | 2.4    | 2.6    | 2.7    | 2.8    |
| 3                 | 3.0                               | 3.0    | 3.0    | 3.0    | 3.0    | 3.1    | 3.1    | 3.2    | 3.4    | 3.5    | 3.7    | 3.8    | 4.0    | 4.2    |
| 4                 | 4.0                               | 4.0    | 4.0    | 4.0    | 4.0    | 4.1    | 4.2    | 4.3    | 4.5    | 4.7    | 4.9    | 5.1    | 5.4    | 5.7    |
| 5                 | 5.0                               | 5.0    | 5.0    | 5.0    | 5.0    | 5.1    | 5.2    | 5.4    | 5.6    | 5.8    | 6.1    | 6.4    | 6.7    | 7.1    |
| 6                 | 6.0                               | 6.0    | 6.0    | 6.0    | 6.0    | 6.1    | 6.3    | 6.5    | 6.7    | 7.0    | 7.3    | 7.7    | 8.1    | 8.5    |
| 7                 | 7.0                               | 7.0    | 7.0    | 7.0    | 7.0    | 7.1    | 7.3    | 7.5    | 7.8    | 8.2    | 8.5    | 9.0    | 9.4    | 9.9    |
| 8                 | 8.0                               | 8.0    | 8.0    | 8.0    | 8.0    | 8.2    | 8.4    | 8.6    | 8.9    | 9.3    | 9.8    | 10.2   | 10.8   | 11.3   |
| 9                 | 9.0                               | 9.0    | 9.0    | 9.0    | 9.0    | 9.2    | 9.4    | 9.7    | 10.1   | 10.5   | 11.0   | 11.5   | 12.1   | 12.7   |
| 10                | 10.0                              | 10.0   | 10.0   | 10.0   | 10.0   | 10.2   | 10.4   | 10.8   | 11.2   | 11.7   | 12.2   | 12.8   | 13.5   | 14.1   |
| 12                | 12.0                              | 12.0   | 12.0   | 12.0   | 12.1   | 12.2   | 12.5   | 12.9   | 13.4   | 14.0   | 14.6   | 15.4   | 16.1   | 17.0   |
| 14                | 14.0                              | 14.0   | 14.0   | 14.0   | 14.1   | 14.3   | 14.6   | 15.1   | 15.7   | 16.3   | 17.1   | 17.9   | 18.8   | 19.8   |
| 16                | 16.0                              | 16.0   | 16.0   | 16.0   | 16.1   | 16.3   | 16.7   | 17.2   | 17.9   | 18.7   | 19.5   | 20.5   | 21.5   | 22.6   |
| 18                | 18.0                              | 18.0   | 18.0   | 18.0   | 18.1   | 18.4   | 18.8   | 19.4   | 20.1   | 21.0   | 22.0   | 23.1   | 24.2   | 25.5   |
| 20                | 20.0                              | 20.0   | 20.0   | 20.0   | 20.1   | 20.4   | 20.9   | 21.5   | 22.4   | 23.3   | 24.4   | 25.6   | 26.9   | 28.3   |
| 22                | 22.0                              | 22.0   | 22.0   | 22.0   | 22.1   | 22.4   | 23.0   | 23.7   | 24.6   | 25.7   | 26.9   | 28.2   | 29.6   | 31.1   |
| 24                | 24.0                              | 24.0   | 24.0   | 24.0   | 24.1   | 24.5   | 25.1   | 25.8   | 26.8   | 28.0   | 29.3   | 30.7   | 32.3   | 33.9   |
| 26                | 26.0                              | 26.0   | 26.0   | 26.0   | 26.1   | 26.5   | 27.1   | 28.0   | 29.1   | 30.3   | 31.7   | 33.3   | 35.0   | 36.8   |
| 28                | 28.0                              | 28.0   | 28.0   | 28.0   | 28.1   | 28.6   | 29.2   | 30.2   | 31.3   | 32.7   | 34.2   | 35.9   | 37.7   | 39.6   |
| 30                | 30.0                              | 30.0   | 30.0   | 30.0   | 30.1   | 30.6   | 31.3   | 32.3   | 33.5   | 35.0   | 36.6   | 38.4   | 40.4   | 42.4   |
| 35                | 35.0                              | 35.0   | 35.0   | 35.0   | 35.2   | 35.7   | 36.5   | 37.7   | 39.1   | 40.8   | 42.7   | 44.8   | 47.1   | 49.5   |
| 40                | 40.0                              | 40.0   | 40.0   | 40.0   | 40.2   | 40.8   | 41.8   | 43.1   | 44.7   | 46.6   | 48.8   | 51.2   | 53.8   | 56.6   |
| 45                | 45.0                              | 45.0   | 45.0   | 45.1   | 45.2   | 45.9   | 47.0   | 48.5   | 50.3   | 52.5   | 54.9   | 57.6   | 60.5   | 63.6   |
| 50                | 50.0                              | 50.0   | 50.0   | 50.1   | 50.2   | 51.0   | 52.2   | 53.9   | 55.9   | 58.3   | 61.0   | 64.0   | 67.3   | 70.7   |
| 55                | 55.0                              | 55.0   | 55.0   | 55.1   | 55.3   | 56.1   | 57.4   | 59.2   | 61.5   | 64.1   | 67.1   | 70.4   | 74.0   | 77.8   |
| 60                | 60.0                              | 60.0   | 60.0   | 60.1   | 60.3   | 61.2   | 62.6   | 64.6   | 67.1   | 70.0   | 73.2   | 76.8   | 80.7   | 84.9   |
| 65                | 65.0                              | 65.0   | 65.1   | 65.1   | 65.3   | 66.3   | 67.9   | 70.0   | 72.7   | 75.8   | 79.3   | 83.2   | 87.4   | 91.9   |
| 70                | 70.0                              | 70.0   | 70.1   | 70.1   | 70.3   | 71.4   | 73.1   | 75.4   | 78.3   | 81.6   | 85.4   | 89.6   | 94.2   | 99.0   |
| 75                | 75.0                              | 75.0   | 75.1   | 75.1   | 75.4   | 76.5   | 78.3   | 80.8   | 83.9   | 87.5   | 91.5   | 96.0   | 100.9  | 106.1  |
| 80                | 80.0                              | 80.0   | 80.1   | 80.1   | 80.4   | 81.6   | 83.5   | 86.2   | 89.4   | 93.3   | 97.7   | 102.4  | 107.6  | 113.1  |
| 85                | 85.0                              | 85.0   | 85.1   | 85.1   | 85.4   | 86.7   | 88.7   | 91.5   | 95.0   | 99.1   | 103.8  | 108.9  | 114.4  | 120.2  |
| 90                | 90.0                              | 90.0   | 90.1   | 90.1   | 90.4   | 91.8   | 94.0   | 96.9   | 100.6  | 105.0  | 109.9  | 115.3  | 121.1  | 127.3  |
| 95                | 95.0                              | 95.0   | 95.1   | 95.1   | 95.5   | 96.9   | 99.2   | 102.3  | 106.2  | 110.8  | 116.0  | 121.7  | 127.8  | 134.4  |
| 100               | 100.0                             | 100.0  | 100.1  | 100.1  | 100.5  | 102.0  | 104.4  | 107.7  | 111.8  | 116.6  | 122.1  | 128.1  | 134.5  | 141.4  |
| 110               | 110.0                             | 110.0  | 110.1  | 110.1  | 110.5  | 112.2  | 114.8  | 118.5  | 123.0  | 128.3  | 134.3  | 140.9  | 148.0  | 155.6  |
| 120               | 120.0                             | 120.0  | 120.1  | 120.1  | 120.6  | 122.4  | 125.3  | 129.2  | 134.2  | 139.9  | 146.5  | 153.7  | 161.4  | 169.7  |
| 130               | 130.0                             | 130.0  | 130.1  | 130.2  | 130.6  | 132.6  | 135.7  | 140.0  | 145.3  | 151.6  | 158.7  | 166.5  | 174.9  | 183.8  |
| 140               | 140.0                             | 140.0  | 140.1  | 140.2  | 140.7  | 142.8  | 146.2  | 150.8  | 156.5  | 163.3  | 170.9  | 179.3  | 188.4  | 198.0  |
| 150               | 150.0                             | 150.0  | 150.1  | 150.2  | 150.7  | 153.0  | 156.6  | 161.6  | 167.7  | 174.9  | 183.1  | 192.1  | 201.8  | 212.1  |
| 160               | 160.0                             | 160.0  | 160.1  | 160.2  | 160.8  | 163.2  | 167.0  | 172.3  | 178.9  | 186.6  | 195.3  | 204.9  | 215.3  | 226.3  |
| 170               | 170.0                             | 170.0  | 170.1  | 170.2  | 170.8  | 173.4  | 177.5  | 183.1  | 190.1  | 198.3  | 207.5  | 217.7  | 228.7  | 240.4  |
| 180               | 180.0                             | 180.0  | 180.1  | 180.2  | 180.9  | 183.6  | 187.9  | 193.9  | 201.2  | 209.9  | 219.7  | 230.5  | 242.2  | 254.6  |
| 190               | 190.0                             | 190.0  | 190.2  | 190.2  | 190.9  | 193.8  | 198.4  | 204.6  | 212.4  | 221.6  | 231.9  | 243.3  | 255.6  | 268.7  |
| 200               | 200.0                             | 200.0  | 200.2  | 200.2  | 201.0  | 204.0  | 208.8  | 215.4  | 223.6  | 233.2  | 244.1  | 256.1  | 269.1  | 282.8  |

