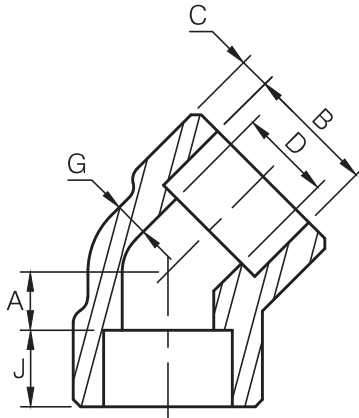


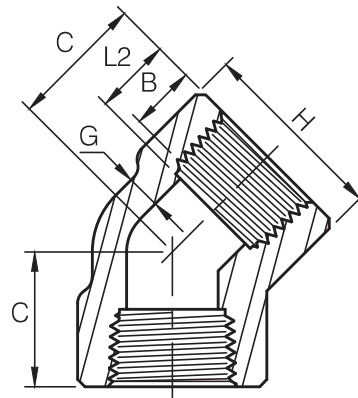


# 45° ELBOW

ASME B16.11-2011(Revision of ASME B16.11-2009)



Dimensions are in millimeters.



Dimensions are in millimeters.

| Socket Welding |                |                  |                  |       |                  |                  |         |         |
|----------------|----------------|------------------|------------------|-------|------------------|------------------|---------|---------|
| DN             | Nom. Pipe Size | B <sup>(2)</sup> | C <sup>(1)</sup> |       | D <sup>(2)</sup> | A <sup>(2)</sup> | G (Min) | J (Min) |
|                |                |                  | (Avg)            | (Min) |                  |                  |         |         |

### 3000Lb

|     |       |       |       |      |       |      |      |      |
|-----|-------|-------|-------|------|-------|------|------|------|
| 6   | 1/8   | 10.8  | 3.18  | 3.18 | 6.9   | 8.0  | 2.41 | 9.5  |
| 8   | 1/4   | 14.2  | 3.78  | 3.30 | 9.3   | 8.0  | 3.02 | 9.5  |
| 10  | 3/8   | 17.6  | 4.01  | 3.50 | 12.6  | 8.0  | 3.20 | 9.5  |
| 15  | 1/2   | 21.8  | 4.67  | 4.09 | 15.8  | 11.0 | 3.73 | 9.5  |
| 20  | 3/4   | 27.2  | 4.90  | 4.27 | 21.0  | 13.0 | 3.91 | 12.5 |
| 25  | 1     | 33.9  | 5.69  | 4.98 | 26.7  | 14.0 | 4.55 | 12.5 |
| 32  | 1-1/4 | 42.7  | 6.07  | 5.28 | 35.1  | 17.5 | 4.85 | 12.5 |
| 40  | 1-1/2 | 48.8  | 6.35  | 5.54 | 40.9  | 20.5 | 5.08 | 12.5 |
| 50  | 2     | 61.2  | 6.93  | 6.04 | 52.5  | 25.5 | 5.54 | 16.0 |
| 65  | 2-1/2 | 73.9  | 8.76  | 7.67 | 62.7  | 28.5 | 7.01 | 16.0 |
| 80  | 3     | 89.8  | 9.52  | 8.30 | 78.0  | 32.0 | 7.62 | 16.0 |
| 100 | 4     | 115.2 | 10.69 | 9.35 | 102.3 | 41.0 | 8.56 | 19.0 |

### 6000Lb

|    |       |      |       |      |      |      |      |      |
|----|-------|------|-------|------|------|------|------|------|
| 6  | 1/8   | 10.8 | 3.96  | 3.43 | 4.0  | 8.0  | 3.15 | 9.5  |
| 8  | 1/4   | 14.2 | 4.60  | 4.01 | 6.4  | 8.0  | 3.68 | 9.5  |
| 10 | 3/8   | 17.6 | 5.03  | 4.37 | 9.2  | 11.0 | 4.01 | 9.5  |
| 15 | 1/2   | 21.8 | 5.97  | 5.18 | 11.8 | 12.5 | 4.78 | 9.5  |
| 20 | 3/4   | 27.2 | 6.96  | 6.04 | 15.6 | 14.0 | 5.56 | 12.5 |
| 25 | 1     | 33.9 | 7.92  | 6.93 | 20.7 | 17.5 | 6.35 | 12.5 |
| 32 | 1-1/4 | 42.7 | 7.92  | 6.93 | 29.5 | 20.5 | 6.35 | 12.5 |
| 40 | 1-1/2 | 48.8 | 8.92  | 7.80 | 34.0 | 25.5 | 7.14 | 12.5 |
| 50 | 2     | 61.2 | 10.92 | 9.50 | 42.9 | 28.5 | 8.74 | 16.0 |

### 9000Lb

|    |       |      |       |       |      |      |       |      |
|----|-------|------|-------|-------|------|------|-------|------|
| 15 | 1/2   | 21.8 | 9.35  | 8.18  | 6.4  | 15.5 | 7.47  | 9.5  |
| 20 | 3/4   | 27.2 | 9.78  | 8.56  | 11.1 | 19.0 | 7.82  | 12.5 |
| 25 | 1     | 33.9 | 11.38 | 9.96  | 15.2 | 20.5 | 9.09  | 12.5 |
| 32 | 1-1/4 | 42.7 | 12.14 | 10.62 | 22.8 | 22.5 | 9.70  | 12.5 |
| 40 | 1-1/2 | 48.8 | 12.70 | 11.12 | 28.0 | 25.5 | 10.15 | 12.5 |
| 50 | 2     | 61.2 | 13.84 | 12.12 | 38.2 | 28.5 | 11.07 | 16.0 |

(1) Average of socket Wall Thickness around periphery shall be no less than listed values. The minimum values are permitted in localized areas.

(2) Tolerance see page 20.

| Threaded |                |                         |                   |   |         |   |
|----------|----------------|-------------------------|-------------------|---|---------|---|
| DN       | Nom. Pipe Size | Length of Thread. (Min) |                   | C | G (Min) | H |
|          |                | B <sup>(*)</sup>        | L2 <sup>(*)</sup> |   |         |   |

### 2000Lb

|     |       |      |      |    |      |     |
|-----|-------|------|------|----|------|-----|
| 6   | 1/8   | 6.4  | 6.7  | 17 | 3.18 | 22  |
| 8   | 1/4   | 8.1  | 10.2 | 17 | 3.18 | 22  |
| 10  | 3/8   | 9.1  | 10.4 | 19 | 3.18 | 25  |
| 15  | 1/2   | 10.9 | 13.6 | 22 | 3.18 | 33  |
| 20  | 3/4   | 12.7 | 13.9 | 25 | 3.18 | 38  |
| 25  | 1     | 14.7 | 17.3 | 28 | 3.68 | 46  |
| 32  | 1-1/4 | 17.0 | 18.0 | 33 | 3.89 | 56  |
| 40  | 1-1/2 | 17.8 | 18.4 | 35 | 4.01 | 62  |
| 50  | 2     | 19.0 | 19.2 | 43 | 4.27 | 75  |
| 65  | 2-1/2 | 23.6 | 28.9 | 52 | 5.61 | 92  |
| 80  | 3     | 25.9 | 30.5 | 64 | 5.99 | 109 |
| 100 | 4     | 27.7 | 33.0 | 79 | 6.55 | 146 |

### 3000Lb

|     |       |      |      |    |       |     |
|-----|-------|------|------|----|-------|-----|
| 6   | 1/8   | 6.4  | 6.7  | 17 | 3.18  | 22  |
| 8   | 1/4   | 8.1  | 10.2 | 19 | 3.30  | 25  |
| 10  | 3/8   | 9.1  | 10.4 | 22 | 3.51  | 33  |
| 15  | 1/2   | 10.9 | 13.6 | 25 | 4.09  | 38  |
| 20  | 3/4   | 12.7 | 13.9 | 28 | 4.32  | 46  |
| 25  | 1     | 14.7 | 17.3 | 33 | 4.98  | 56  |
| 32  | 1-1/4 | 17.0 | 18.0 | 35 | 5.28  | 62  |
| 40  | 1-1/2 | 17.8 | 18.4 | 43 | 5.56  | 75  |
| 50  | 2     | 19.0 | 19.2 | 44 | 7.14  | 84  |
| 65  | 2-1/2 | 23.6 | 28.9 | 52 | 7.65  | 102 |
| 80  | 3     | 25.9 | 30.5 | 64 | 8.84  | 121 |
| 100 | 4     | 27.7 | 33.0 | 79 | 11.18 | 152 |

### 6000Lb

|     |       |      |      |    |       |     |
|-----|-------|------|------|----|-------|-----|
| 6   | 1/8   | 6.4  | 6.7  | 19 | 6.35  | 25  |
| 8   | 1/4   | 8.1  | 10.2 | 22 | 6.60  | 33  |
| 10  | 3/8   | 9.1  | 10.4 | 25 | 6.98  | 38  |
| 15  | 1/2   | 10.9 | 13.6 | 28 | 8.15  | 46  |
| 20  | 3/4   | 12.7 | 13.9 | 33 | 8.53  | 56  |
| 25  | 1     | 14.7 | 17.3 | 35 | 9.93  | 62  |
| 32  | 1-1/4 | 17.0 | 18.0 | 43 | 10.59 | 75  |
| 40  | 1-1/2 | 17.8 | 18.4 | 44 | 11.07 | 84  |
| 50  | 2     | 19.0 | 19.2 | 52 | 12.09 | 102 |
| 65  | 2-1/2 | 23.6 | 28.9 | 64 | 15.29 | 121 |
| 80  | 3     | 25.9 | 30.5 | 79 | 16.64 | 146 |
| 100 | 4     | 27.7 | 33.0 | 79 | 18.67 | 152 |

(\*) Dimension B is minimum length of perfect thread. The length of useful thread (B plus threads with fully formed roots and flat crests) shall not be less than L2 (effective length of external thread) required by American National Standard for pipe threads (ANSI / ASME B1.20.1).