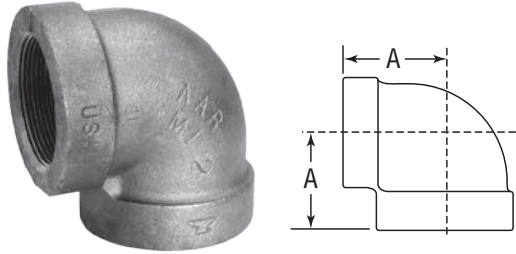
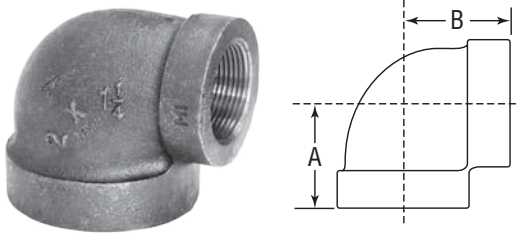


## Class 300 (XS/XH)

|  <b>FIGURE 1161</b><br>90° Elbow Straight | Size  |     | A       |     | Unit Weight |      |       |      |
|----------------------------------------------------------------------------------------------------------------------------|-------|-----|---------|-----|-------------|------|-------|------|
|                                                                                                                            |       |     |         |     | Black       |      | Galv. |      |
|                                                                                                                            | NPS   | DN  | in      | mm  | lbs         | kg   | lbs   | kg   |
|                                           | 1/4   | 8   | 1 5/16  | 24  | 0.20        | 0.09 | 0.20  | 0.09 |
|                                                                                                                            | 3/8   | 10  | 1 1/16  | 27  | 0.29        | 0.13 | 0.29  | 0.13 |
|                                                                                                                            | 1/2   | 15  | 1 1/4   | 32  | 0.47        | 0.21 | 0.47  | 0.21 |
|                                                                                                                            | 3/4   | 20  | 1 7/16  | 37  | 0.66        | 0.30 | 0.66  | 0.30 |
|                                                                                                                            | 1     | 25  | 1 5/8   | 41  | 1.15        | 0.52 | 1.15  | 0.52 |
|                                                                                                                            | 1 1/4 | 32  | 1 15/16 | 49  | 1.88        | 0.85 | 1.88  | 0.85 |
|                                                                                                                            | 1 1/2 | 40  | 2 1/8   | 54  | 2.47        | 1.12 | 2.47  | 1.12 |
|                                                                                                                            | 2     | 50  | 2 1/2   | 64  | 3.85        | 1.75 | 3.85  | 1.75 |
|                                                                                                                            | 2 1/2 | 65  | 2 15/16 | 75  | 5.80        | 2.63 | 5.80  | 2.63 |
|                                                                                                                            | 3     | 80  | 3 3/8   | 86  | 9.95        | 4.51 | 9.95  | 4.51 |
|                                                                                                                            | 4     | 100 | 4 1/2   | 114 | 16.00       | 7.26 | 16.00 | 7.26 |

|  <b>FIGURE 1161R</b><br>90° Reducing Elbow | Size          |         | A      |    | B      |    | Unit Weight |      |       |      |
|-----------------------------------------------------------------------------------------------------------------------------|---------------|---------|--------|----|--------|----|-------------|------|-------|------|
|                                                                                                                             |               |         |        |    |        |    | Black       |      | Galv. |      |
|                                                                                                                             | NPS           | DN      | in     | mm | in     | mm | lbs         | kg   | lbs   | kg   |
|                                          | 3/8 x 1/4     | 10 x 8  | 1      | 25 | 1      | 25 | 0.26        | 0.12 | —     | —    |
|                                                                                                                             | 1/2 x 3/8     | 15 x 10 | 1 3/16 | 30 | 1 3/16 | 30 | 0.41        | 0.19 | —     | —    |
|                                                                                                                             | 3/4 x 1/2     | 20 x 15 | 1 5/16 | 33 | 1 3/8  | 35 | 0.62        | 0.28 | 0.62  | 0.28 |
|                                                                                                                             | 1 x 1/2       | 25 x 15 | 1 7/16 | 37 | 1 1/2  | 38 | 0.87        | 0.39 | —     | —    |
|                                                                                                                             | 1 x 3/4       | 25 x 20 | 1 1/2  | 38 | 1 9/16 | 40 | 1.00        | 0.45 | 1.00  | .45  |
|                                                                                                                             | 1 1/4 x 3/4   | 32 x 20 | 1 5/8  | 41 | 1 3/4  | 44 | 1.41        | 0.64 | —     | —    |
|                                                                                                                             | 1 1/4 x 1     | 32 x 25 | 1 3/4  | 44 | 1 7/8  | 47 | 1.60        | 0.73 | —     | —    |
|                                                                                                                             | 1 1/2 x 1     | 40 x 25 | 1 7/8  | 47 | 2      | 51 | 1.89        | 0.86 | —     | —    |
|                                                                                                                             | 1 1/2 x 1 1/4 | 40 x 32 | 2      | 51 | 2 1/16 | 52 | 2.15        | 0.98 | —     | —    |
|                                                                                                                             | 2 x 1 1/4     | 50 x 32 | 2 1/8  | 54 | 2 5/16 | 59 | 3.12        | 1.41 | 3.12  | 1.41 |
|                                                                                                                             | 2 x 1 1/2     | 50 x 40 | 2 1/4  | 57 | 2 3/8  | 60 | 3.30        | 1.50 | —     | —    |

**Note:** See following page for pressure-temperature ratings. Galvanized weights may vary. Please contact your Anvil Representative if you need verification.  
All Elbows & Tees 3/8" (10 DN) and Larger are 100% Gas Tested at a Minimum of 100 PSI. (6.9 bar)

| PROJECT INFORMATION |  | APPROVAL STAMP                             |  |
|---------------------|--|--------------------------------------------|--|
| Project:            |  | <input type="checkbox"/> Approved          |  |
| Address:            |  | <input type="checkbox"/> Approved as noted |  |
| Contractor:         |  | <input type="checkbox"/> Not approved      |  |
| Engineer:           |  | Remarks:                                   |  |
| Submittal Date:     |  |                                            |  |
| Notes 1:            |  |                                            |  |
| Notes 2:            |  |                                            |  |

# MALLEABLE IRON FITTINGS



**Malleable Iron Threaded Pipe Unions  
Pressure - Temperature Ratings**

| Temperature        |                       | Pressure  |      |           |      |           |      |
|--------------------|-----------------------|-----------|------|-----------|------|-----------|------|
|                    |                       | Class 150 |      | Class 250 |      | Class 300 |      |
| (°F)               | (°C)                  | psi       | bar  | psi       | bar  | psi       | bar  |
| -20°<br>to<br>150° | -28.9°<br>to<br>65.6° | 300       | 20.7 | 500       | 34.5 | 600       | 41.4 |
| 200°               | 93.3°                 | 265       | 18.3 | 455       | 31.4 | 550       | 37.9 |
| 250°               | 121.1°                | 225       | 15.5 | 405       | 27.9 | 505       | 34.8 |
| 300°               | 148.9°                | 185       | 12.8 | 360       | 24.8 | 460       | 31.7 |
| 350°               | 176.7°                | 150       | 10.3 | 315       | 21.7 | 415       | 28.6 |
| 400°               | 204.4°                | 110       | 7.6  | 270       | 18.6 | 370       | 25.5 |
| 450°               | 232.2°                | 75        | 5.2  | 225       | 15.5 | 325       | 22.4 |
| 500°               | 260.0°                | —         | —    | 180       | 12.4 | 280       | 19.3 |
| 550°               | 287.8°                | —         | —    | 130       | 9.0  | 230       | 15.9 |

**Note:** Unions with Copper or Copper Alloy seats are not intended for use where temperature exceeds 450°F



For Listings/Approval Details and Limitations, visit our website at [www.anvilintl.com](http://www.anvilintl.com) or contact an Anvil Sales Representative.

**Malleable Iron Threaded Fittings  
Pressure - Temperature Ratings**

| Temperature        |                       | Pressure  |      |                          |       |                            |       |                            |      |
|--------------------|-----------------------|-----------|------|--------------------------|-------|----------------------------|-------|----------------------------|------|
|                    |                       | Class 150 |      | Class 300                |       |                            |       |                            |      |
|                    |                       |           |      | Sizes ¼"–1"<br>(6–25 mm) |       | Sizes 1¼"–2"<br>(32–51 mm) |       | Sizes 2½"–3"<br>(64–76 mm) |      |
| (°F)               | (°C)                  | psi       | bar  | psi                      | bar   | psi                        | bar   | psi                        | bar  |
| -20°<br>to<br>150° | -28.9°<br>to<br>65.6° | 300       | 20.7 | 2,000                    | 137.9 | 1,500                      | 103.4 | 1,000                      | 68.9 |
| 200°               | 93.3                  | 265       | 18.3 | 1,785                    | 123.1 | 1,350                      | 93.1  | 910                        | 62.7 |
| 250°               | 121.1                 | 225       | 15.5 | 1,575                    | 108.6 | 1,200                      | 82.7  | 825                        | 56.9 |
| 300°               | 148.9                 | 185       | 12.8 | 1,360                    | 93.8  | 1,050                      | 72.4  | 735                        | 50.7 |
| 350°               | 176.7                 | 150       | 10.3 | 1,150                    | 79.3  | 900                        | 62.1  | 650                        | 44.8 |
| 400°               | 204.4                 | —         | —    | 935                      | 64.5  | 750                        | 51.7  | 560                        | 38.6 |
| 450°               | 232.2                 | —         | —    | 725                      | 50.0  | 600                        | 41.4  | 475                        | 32.8 |
| 500°               | 260.0                 | —         | —    | 510                      | 35.2  | 450                        | 31.0  | 385                        | 26.5 |
| 550°               | 287.8                 | —         | —    | 300                      | 20.7  | 300                        | 20.7  | 300                        | 20.7 |

Anvil Class 150/300 Malleable Iron Fittings conform to ASME B16.3 and Unions conform to ASME B16.39.

**ALL ELBOWS & TEES ¾" (10 DN) and LARGER ARE 100% GAS TESTED AT A MINIMUM OF 100 PSI. (6.9 bar)**

## Standards and Specifications

|                                | Dimensions  | Material   | Galvanizing* | Thread       | Pressure Rating |
|--------------------------------|-------------|------------|--------------|--------------|-----------------|
| <b>MALLEABLE IRON FITTINGS</b> |             |            |              |              |                 |
| Class 150/PN 20                | ASME B16.3  | ASTM A-197 | ASTM A-153   | ASME B1 20.1 | ASME B16.3      |
| Class 300/PN 50                | ASME B16.3  | ASTM A-197 | ASTM A-153   | ASME B1 20.1 | ASME B16.3      |
| <b>MALLEABLE IRON UNIONS</b>   |             |            |              |              |                 |
| Class 150/PN 20                | ASME B16.39 | ASTM A-197 | ASTM A-153   | ASME B1 20.1 | ASME B16.39     |
| Class 250                      | ASME B16.39 | ASTM A-197 | ASTM A-153   | ASME B1 20.1 | ASME B16.39     |
| Class 300/PN 50                | ASME B16.39 | ASTM A-197 | ASTM A-153   | ASME B1 20.1 | ASME B16.39     |

\* ASTM B 633, Type I, SC 4, may be supplied as alternate zinc coating per applicable ASME B16 product standard.

## General Assembly of Threaded Fittings

- 1) Inspect both male and female components prior to assembly.
  - Threads should be free from mechanical damage, dirt, chips and excess cutting oil.
  - Clean or replace components as necessary.
- 2) Application of thread sealant
  - Use a thread sealant that is fast drying, sets-up to a semi hard condition and is vibration resistant. Alternately, an anaerobic sealant may be utilized.
  - Thoroughly mix the thread sealant prior to application.
  - Apply a thick even coat to the male threads only. Best application is achieved with a brush stiff enough to force sealant down to the root of the threads.
- 3) Joint Makeup
  - For sizes up to and including 2" pipe, wrench tight makeup is considered three full turns past handtight. Handtight engagement for 1/2" through 2" thread varies from 4 1/2 turns to 5 turns.
  - For 2 1/2" through 4" sizes, wrench tight makeup is considered two full turns past handtight. Handtight engagement for 2 1/2" through 4" thread varies from 5 1/2 turns to 6 3/4 turns.