



Premier Manufacturer of ANSI Standard Pipe Flanges

# ANSI FLANGES

Technical Data Sheets



## FEATURING

**ANSI B16.5 Flanges**

**ANSI B16.47 Large Diameter Flanges**

**ANSI Pressure Class Options (150# to 2500#)**

**ANSI Flange Materials (Carbon Steel, Stainless Steel, Alloy Steel, Nickel Alloys)**

**ANSI-Compliant Manufacturing Process**

## ANSI FLANGE APPLICATIONS



Oil & Gas  
Processing



Petrochemical  
Production



Industrial Piping  
Systems



Chemical  
Processing



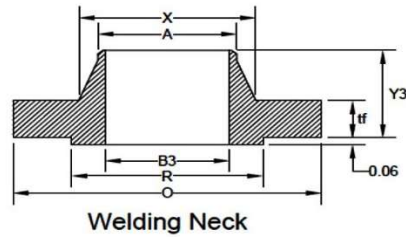
Power  
Generation

**ANSI CERTIFIED | PRECISION ENGINEERED | INDUSTRY TRUSTED**

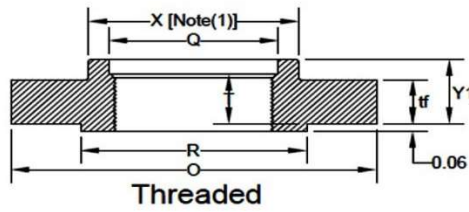
For detailed ANSI Flange  
specifications & custom solutions:

Visit: <https://wernerflanges.com> | Contact: [sales@wernerflanges.com](mailto:sales@wernerflanges.com)

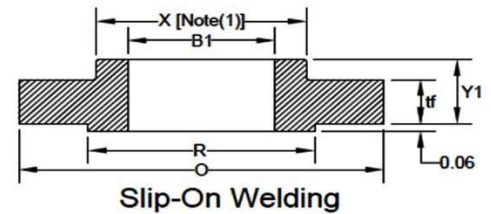
## ANSI B16.5 Class 150 Flanges



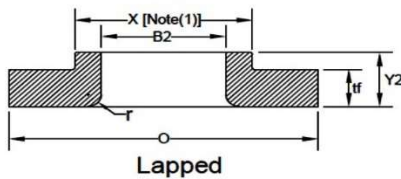
Welding Neck



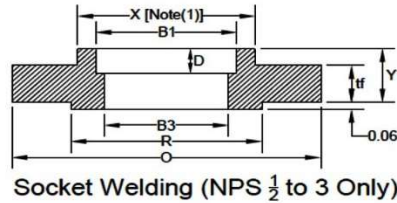
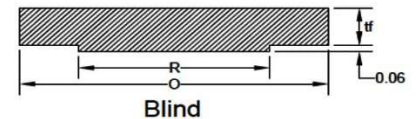
Threaded



Slip-On Welding



Lapped

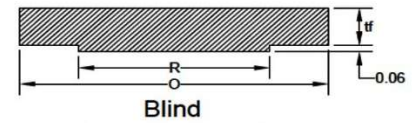
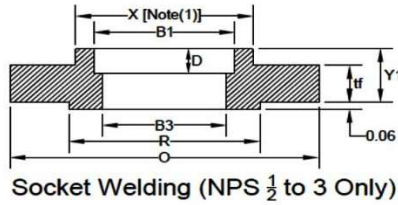
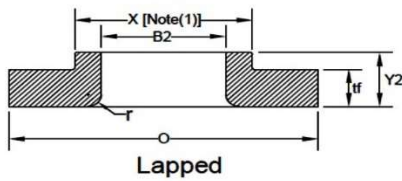
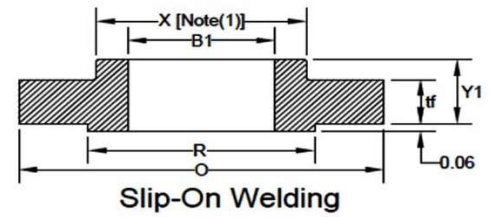
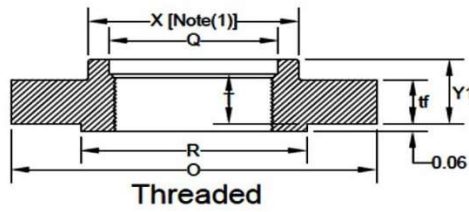
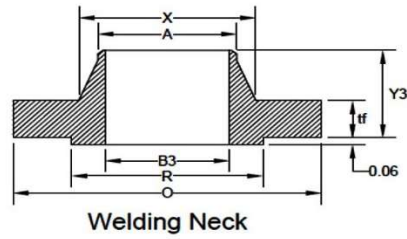

Socket Welding (NPS  $\frac{1}{2}$  to 3 Only)


Blind

| NPS   | O     | T    | R     | X     | No. & Dia. of Holes | Bolt Circle Dia. | L2   | H     | B2    | L    | B     | r    | L3   | B3    | D    |
|-------|-------|------|-------|-------|---------------------|------------------|------|-------|-------|------|-------|------|------|-------|------|
| 1/2   | 3.50  | 0.44 | 1.38  | 1.19  | 4-0.62              | 2.38             | 1.88 | 0.84  | 0.62  | 0.62 | 0.88  | 0.12 | 0.62 | 0.90  | 0.38 |
| 3/4   | 3.88  | 0.50 | 1.69  | 1.50  | 4-0.62              | 2.75             | 2.06 | 1.05  | 0.82  | 0.62 | 1.09  | 0.12 | 0.62 | 1.11  | 0.44 |
| 1     | 4.25  | 0.56 | 2.00  | 1.94  | 4-0.62              | 3.12             | 2.19 | 1.32  | 1.05  | 0.69 | 1.36  | 0.12 | 0.69 | 1.38  | 0.50 |
| 1-1/4 | 4.62  | 0.62 | 2.50  | 2.31  | 4-0.62              | 3.50             | 2.25 | 1.66  | 1.38  | 0.81 | 1.70  | 0.19 | 0.81 | 1.72  | 0.56 |
| 1-1/2 | 5.00  | 0.68 | 2.88  | 2.56  | 4-0.62              | 3.88             | 2.44 | 1.90  | 1.61  | 0.88 | 1.95  | 0.25 | 0.88 | 1.97  | 0.62 |
| 2     | 6.00  | 0.75 | 3.62  | 3.06  | 4-0.75              | 4.75             | 2.50 | 2.38  | 2.07  | 1.00 | 2.44  | 0.31 | 1.00 | 2.46  | 0.69 |
| 2-1/2 | 7.00  | 0.88 | 4.12  | 3.56  | 4-0.75              | 5.50             | 2.75 | 2.88  | 2.47  | 1.12 | 2.94  | 0.31 | 1.12 | 2.97  | 0.75 |
| 3     | 7.50  | 0.94 | 5.00  | 4.25  | 4-0.75              | 6.00             | 2.75 | 3.50  | 3.07  | 1.19 | 3.57  | 0.38 | 1.19 | 3.60  | 0.81 |
| 3-1/2 | 8.50  | 0.94 | 5.50  | 4.81  | 8-0.75              | 7.00             | 2.81 | 4.00  | 3.55  | 1.25 | 4.07  | 0.38 | 1.25 | 4.10  | 0.88 |
| 4     | 9.00  | 0.94 | 6.19  | 5.31  | 8-0.75              | 7.50             | 3.00 | 4.50  | 4.03  | 1.31 | 4.57  | 0.44 | 1.31 | 4.60  | 0.94 |
| 5     | 10.00 | 0.94 | 7.31  | 6.44  | 8-0.88              | 8.50             | 3.50 | 5.56  | 5.05  | 1.44 | 5.66  | 0.44 | 1.44 | 5.69  | 0.94 |
| 6     | 11.00 | 1.00 | 8.50  | 7.56  | 8-0.88              | 9.50             | 3.50 | 6.63  | 6.07  | 1.56 | 6.72  | 0.50 | 1.56 | 6.75  | 1.06 |
| 8     | 13.50 | 1.12 | 10.62 | 9.69  | 8-0.88              | 11.75            | 4.00 | 8.63  | 7.98  | 1.75 | 8.72  | 0.50 | 1.75 | 8.75  | 1.25 |
| 10    | 16.00 | 1.19 | 12.75 | 12.00 | 12-1.00             | 14.25            | 4.00 | 10.75 | 10.02 | 1.94 | 10.88 | 0.50 | 1.94 | 10.92 | 1.31 |
| 12    | 19.00 | 1.25 | 15.00 | 14.38 | 12-1.00             | 17.00            | 4.50 | 12.75 | 12.00 | 2.19 | 12.88 | 0.50 | 2.19 | 12.92 | 1.56 |
| 14    | 21.00 | 1.38 | 16.25 | 15.75 | 12-1.12             | 18.75            | 5.00 | 14.00 | 13.25 | 2.25 | 14.14 | 0.50 | 3.12 | 14.18 | 1.63 |
| 16    | 23.50 | 1.44 | 18.50 | 18.00 | 16-1.12             | 21.25            | 5.00 | 16.00 | 15.25 | 2.50 | 16.16 | 0.50 | 3.44 | 16.19 | 1.75 |
| 18    | 25.00 | 1.56 | 21.00 | 19.88 | 16-1.25             | 22.75            | 5.50 | 18.00 | 17.25 | 2.69 | 18.18 | 0.50 | 3.81 | 18.20 | 1.94 |
| 20    | 27.50 | 1.69 | 23.00 | 22.00 | 20-1.25             | 25.00            | 5.69 | 20.00 | 19.25 | 2.88 | 20.20 | 0.50 | 4.06 | 20.25 | 2.13 |
| 22    | 29.50 | 1.81 | 25.25 | 24.25 | 20-1.38             | 27.25            | 5.88 | 22.00 | 21.25 | 3.13 | 22.22 | 0.50 | 4.25 | 22.25 | 2.38 |
| 24    | 32.00 | 1.88 | 27.25 | 26.12 | 20-1.38             | 29.50            | 6.00 | 24.00 | 23.25 | 3.25 | 24.25 | 0.50 | 4.38 | 24.25 | 2.50 |

Dimensions in inches

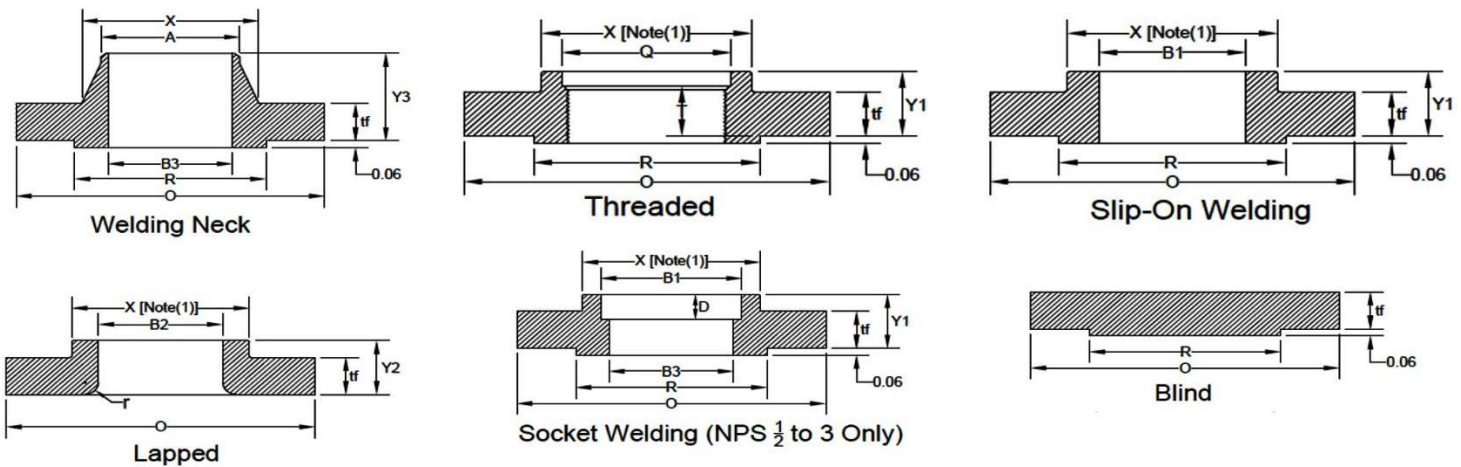
## ANSI B16.5 Class 300 Flanges



| NPS             | O     | R     | X     | T    | T <sub>J</sub> | Bolt Circle Dia. | No. & Dia of Holes | H     | B     | B <sub>2</sub> <sup>b</sup> | B <sub>3</sub> | r    | L    | L <sub>2</sub> | L <sub>3</sub> <sup>c</sup> | D    | C     | Thr  |
|-----------------|-------|-------|-------|------|----------------|------------------|--------------------|-------|-------|-----------------------------|----------------|------|------|----------------|-----------------------------|------|-------|------|
| $\frac{1}{2}$   | 3.75  | 1.38  | 1.50  | 0.50 | 0.56           | 2.62             | 4-0.63             | 0.84  | 0.88  | 0.62                        | 0.90           | 0.12 | 0.81 | 2.00           | 0.88                        | 0.38 | 0.93  | 0.62 |
| $\frac{3}{4}$   | 4.62  | 1.69  | 1.88  | 0.56 | 0.62           | 3.25             | 4-0.75             | 1.05  | 1.09  | 0.82                        | 1.11           | 0.12 | 0.94 | 2.19           | 1.00                        | 0.44 | 1.14  | 0.62 |
| 1               | 4.88  | 2.00  | 2.12  | 0.62 | 0.69           | 3.50             | 4-0.75             | 1.32  | 1.36  | 1.05                        | 1.38           | 0.12 | 1.00 | 2.38           | 1.06                        | 0.50 | 1.41  | 0.69 |
| 1 $\frac{1}{4}$ | 5.25  | 2.50  | 2.50  | 0.69 | 0.75           | 3.88             | 4-0.75             | 1.66  | 1.70  | 1.38                        | 1.72           | 0.19 | 1.00 | 2.50           | 1.06                        | 0.56 | 1.75  | 0.81 |
| 1 $\frac{1}{2}$ | 6.12  | 2.88  | 2.75  | 0.75 | 0.81           | 4.50             | 4-0.88             | 1.90  | 1.95  | 1.61                        | 1.97           | 0.25 | 1.13 | 2.63           | 1.19                        | 0.62 | 1.98  | 0.88 |
| 2               | 6.50  | 3.62  | 3.31  | 0.81 | 0.88           | 5.00             | 8-0.75             | 2.38  | 2.44  | 2.07                        | 2.46           | 0.31 | 1.25 | 2.69           | 1.31                        | 0.69 | 2.50  | 1.12 |
| 2 $\frac{1}{2}$ | 7.50  | 4.12  | 3.94  | 0.94 | 1.00           | 5.88             | 8-0.88             | 2.88  | 2.94  | 2.47                        | 2.97           | 0.31 | 1.44 | 2.94           | 1.50                        | 0.75 | 3.00  | 1.25 |
| 3               | 8.25  | 5.00  | 4.62  | 1.06 | 1.12           | 6.62             | 8-0.88             | 3.50  | 3.57  | 3.07                        | 3.60           | 0.38 | 1.63 | 3.06           | 1.69                        | 0.81 | 3.63  | 1.25 |
| 3 $\frac{1}{2}$ | 9.00  | 5.50  | 5.25  | 1.12 | 1.19           | 7.25             | 8-0.88             | 4.00  | 4.07  | 3.55                        | 4.10           | 0.38 | 1.69 | 3.13           | 1.75                        |      | 4.13  | 1.44 |
| 4               | 10.00 | 6.19  | 5.75  | 1.19 | 1.25           | 7.88             | 8-0.88             | 4.50  | 4.57  | 4.03                        | 4.60           | 0.44 | 1.82 | 3.32           | 1.88                        |      | 4.63  | 1.44 |
| 5               | 11.00 | 7.31  | 7.00  | 1.31 | 1.38           | 9.25             | 8-0.88             | 5.56  | 5.66  | 5.05                        | 5.69           | 0.44 | 1.94 | 3.82           | 2.00                        |      | 5.69  | 1.69 |
| 6               | 12.50 | 8.50  | 8.12  | 1.38 | 1.44           | 10.62            | 12-0.88            | 6.63  | 6.72  | 6.07                        | 6.75           | 0.50 | 2.00 | 3.82           | 2.06                        |      | 6.75  | 1.81 |
| 8               | 15.00 | 10.62 | 10.25 | 1.56 | 1.62           | 13.00            | 12-1.00            | 8.63  | 8.72  | 7.98                        | 8.75           | 0.50 | 2.38 | 4.32           | 2.44                        |      | 8.75  | 2.00 |
| 10              | 17.50 | 12.75 | 12.62 | 1.81 | 1.88           | 15.25            | 16-1.12            | 10.75 | 10.88 | 10.02                       | 10.92          | 0.50 | 2.56 | 4.56           | 3.75                        |      | 10.88 | 2.19 |
| 12              | 20.50 | 15.00 | 14.75 | 1.94 | 2.00           | 17.75            | 16-1.25            | 12.75 | 12.88 | 12.00                       | 12.92          | 0.50 | 2.82 | 5.06           | 4.00                        |      | 12.94 | 2.38 |
| 14              | 23.00 | 16.25 | 16.75 | 2.06 | 2.12           | 20.25            | 20-1.25            | 14.00 | 14.14 | 13.25                       | 14.18          | 0.50 | 2.94 | 5.56           | 4.38                        |      | 14.19 | 2.50 |
| 16              | 25.50 | 18.50 | 19.00 | 2.19 | 2.25           | 22.50            | 20-1.38            | 16.00 | 16.16 | 15.25                       | 16.19          | 0.50 | 3.19 | 5.69           | 4.75                        |      | 16.19 | 2.69 |
| 18              | 28.00 | 21.00 | 21.00 | 2.31 | 2.38           | 24.75            | 24-1.38            | 18.00 | 18.18 | 17.25                       | 18.20          | 0.50 | 3.44 | 6.19           | 5.12                        |      | 18.19 | 2.75 |
| 20              | 30.50 | 23.00 | 23.12 | 2.44 | 2.50           | 27.00            | 24-1.38            | 20.00 | 20.20 | 19.25                       | 20.25          | 0.50 | 3.69 | 6.32           | 5.50                        |      | 20.19 | 2.88 |
| 22              | 33.00 | 25.25 | 25.25 | 2.57 | 2.63           | 29.25            | 24-1.63            | 22.00 | 22.22 | 21.25                       | 22.25          | 0.50 | 3.93 | 6.43           | 5.75                        |      | 22.19 | 3.13 |
| 24              | 36.00 | 27.25 | 27.62 | 2.69 | 2.75           | 32.00            | 24-1.63            | 24.00 | 24.25 | 23.25                       | 24.25          | 0.50 | 4.13 | 6.56           | 6.00                        |      | 24.19 | 3.25 |

Dimensions in inches

## ANSI B16.5 Class 400 Flanges

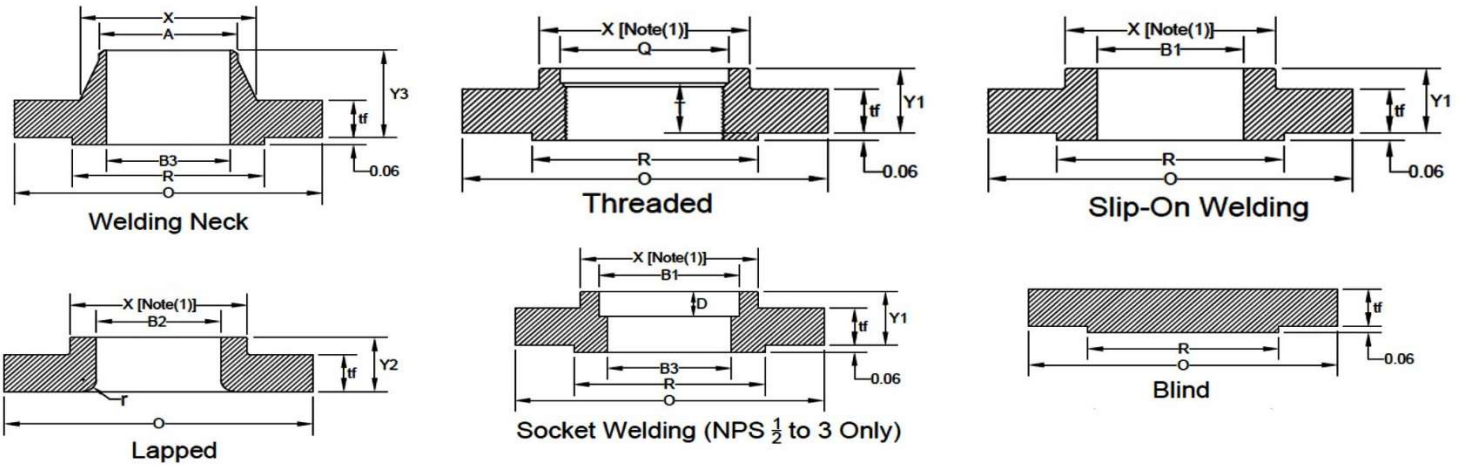


| NPS   | O     | T    | R     | X     | No. & Dia. of Holes | Bolt Circle Dia. | L2   | H     | B2                            | L    | B     | r    | L3   | B3    | D    | C    | THr  |
|-------|-------|------|-------|-------|---------------------|------------------|------|-------|-------------------------------|------|-------|------|------|-------|------|------|------|
| 1/2   | 3.75  | 0.56 | 1.38  | 1.50  | 4-0.62              | 2.62             | 2.06 | 0.84  | To be specified by purchaser. | 0.88 | 0.88  | 0.12 | 0.88 | 0.90  | 0.38 | 0.93 | 0.62 |
| 3/4   | 4.62  | 0.62 | 1.69  | 1.88  | 4-0.75              | 3.25             | 2.25 | 1.05  |                               | 1.00 | 1.09  | 0.12 | 1.00 | 1.11  | 0.44 | 1.14 | 0.62 |
| 1     | 4.88  | 0.69 | 2.00  | 2.12  | 4-0.75              | 3.50             | 2.44 | 1.32  |                               | 1.06 | 1.36  | 0.12 | 1.06 | 1.38  | 0.50 | 1.41 | 0.69 |
| 1-1/4 | 5.25  | 0.81 | 2.50  | 2.50  | 4-0.75              | 3.88             | 2.62 | 1.66  |                               | 1.12 | 1.70  | 0.19 | 1.12 | 1.72  | 0.56 | 1.75 | 0.81 |
| 1-1/2 | 6.12  | 0.88 | 2.88  | 2.75  | 4-0.88              | 4.50             | 2.75 | 1.90  |                               | 1.25 | 1.95  | 0.25 | 1.25 | 1.97  | 0.62 | 1.99 | 0.88 |
| 2     | 6.50  | 1.00 | 3.62  | 3.31  | 8-0.75              | 5.00             | 2.88 | 2.38  |                               | 1.44 | 2.44  | 0.31 | 1.44 | 2.46  | 0.69 | 2.50 | 1.12 |
| 2-1/2 | 7.50  | 1.12 | 4.12  | 3.94  | 8-0.88              | 5.88             | 3.12 | 2.88  |                               | 1.62 | 2.94  | 0.31 | 1.62 | 2.97  | 0.75 | 3.00 | 1.25 |
| 3     | 8.25  | 1.25 | 5.00  | 4.62  | 8-0.88              | 6.62             | 3.25 | 3.50  |                               | 1.81 | 3.57  | 0.38 | 1.81 | 3.60  | 0.81 | 3.63 | 1.38 |
| 3-1/2 | 9.00  | 1.38 | 5.50  | 5.25  | 8-1.00              | 7.25             | 3.38 | 4.00  |                               | 1.94 | 4.07  | 0.38 | 1.94 | 4.10  | /    |      | 1.56 |
| 4     | 10.00 | 1.38 | 6.19  | 5.75  | 8-1.00              | 7.88             | 3.50 | 4.50  |                               | 2.00 | 4.57  | 0.44 | 2.00 | 4.60  |      |      | 1.44 |
| 5     | 11.00 | 1.50 | 7.31  | 7.00  | 8-1.00              | 9.25             | 4.00 | 5.56  |                               | 2.12 | 5.66  | 0.44 | 2.12 | 5.69  | /    |      | 1.69 |
| 6     | 12.5  | 1.62 | 8.50  | 8.12  | 12-1.00             | 10.62            | 4.06 | 6.63  |                               | 2.25 | 6.72  | 0.50 | 2.25 | 6.75  |      |      | 1.81 |
| 8     | 15.00 | 1.88 | 10.62 | 10.25 | 12-1.12             | 13.00            | 4.62 | 8.63  |                               | 2.69 | 8.72  | 0.50 | 2.69 | 8.75  | /    |      | 2.00 |
| 10    | 17.5  | 2.12 | 12.75 | 12.62 | 16-1.25             | 15.25            | 4.88 | 10.75 |                               | 2.88 | 10.88 | 0.50 | 4.00 | 10.92 |      |      | 2.19 |
| 12    | 20.5  | 2.25 | 15.00 | 14.75 | 16-1.38             | 17.75            | 5.38 | 12.75 |                               | 3.12 | 12.88 | 0.50 | 4.25 | 12.92 | /    |      | 2.38 |
| 14    | 23.00 | 2.38 | 16.25 | 16.75 | 20-1.38             | 20.25            | 5.88 | 14.00 |                               | 3.31 | 14.14 | 0.50 | 4.62 | 14.18 |      |      | 2.50 |
| 16    | 25.5  | 2.50 | 18.50 | 19.00 | 20-1.50             | 22.50            | 6.00 | 16.00 |                               | 3.69 | 16.16 | 0.50 | 5.00 | 16.19 | /    |      | 2.69 |
| 18    | 28.00 | 2.62 | 21.00 | 21.00 | 24-1.50             | 24.75            | 6.50 | 18.00 |                               | 3.88 | 18.18 | 0.50 | 5.38 | 18.20 |      |      | 2.75 |
| 20    | 30.5  | 2.75 | 23.00 | 23.12 | 24-1.62             | 27.00            | 6.62 | 20.00 |                               | 4.00 | 20.20 | 0.50 | 5.75 | 20.25 |      |      | 2.88 |
| 22    | 33.00 | 2.88 | 25.25 | 25.25 | 24-1.75             | 29.25            | 6.75 | 22.00 |                               | 4.25 | 22.22 | 0.50 | 6.00 | 22.25 |      |      | --   |
| 24    | 36.00 | 3.00 | 27.25 | 27.62 | 24-1.88             | 32.00            | 6.88 | 24.00 |                               | 4.50 | 24.25 | 0.50 | 6.25 | 24.25 |      |      | 3.25 |

Dimensions in inches

- Sizes NPS 1/2 through 3-1/2 are same as Class 600 flanges.
- 1/4 in. raised face not included in dimensions T, L and L2.
- Bolt hole diameter 1/8 in. larger than bolt diameter.

## ANSI B16.5 Class 600 Flanges

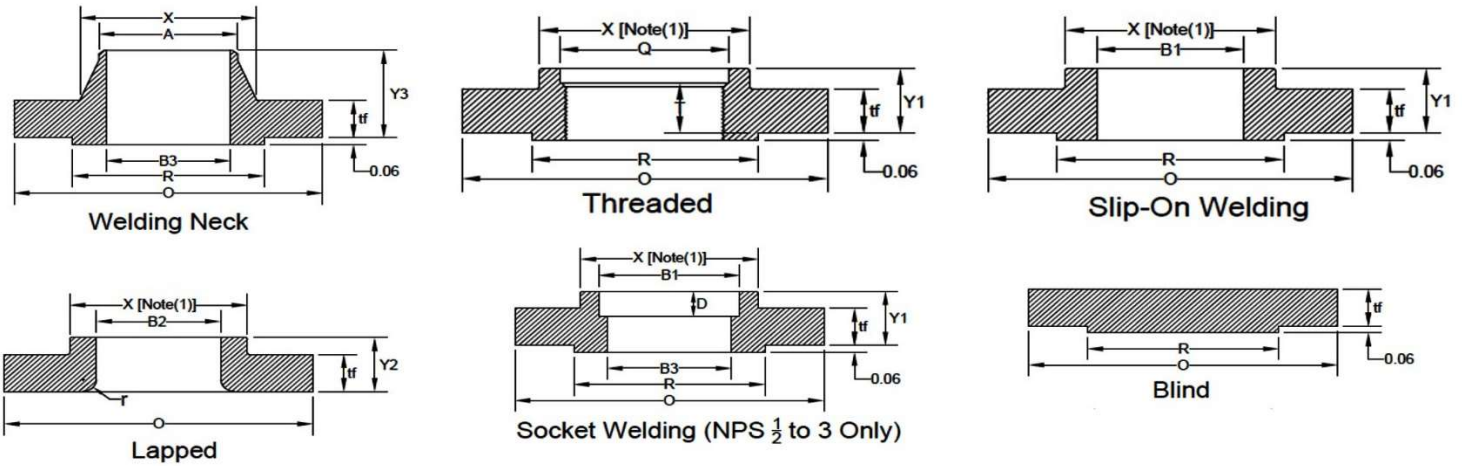


| NPS   | O     | T    | R     | X     | No. & Dia. of Holes | Bolt Circle Dia. | L2   | H     | B2                            | L    | B     | r    | L3   | B3    | D    | C    | Thr  |
|-------|-------|------|-------|-------|---------------------|------------------|------|-------|-------------------------------|------|-------|------|------|-------|------|------|------|
| 1/2   | 3.75  | 0.56 | 1.38  | 1.50  | 4-0.62              | 2.62             | 2.06 | 0.84  | To be specified by purchaser. | 0.88 | 0.88  | 0.12 | 0.88 | 0.90  | 0.38 | 0.93 | 0.62 |
| 3/4   | 4.62  | 0.62 | 1.69  | 1.88  | 4-0.75              | 3.25             | 2.25 | 1.05  |                               | 1.00 | 1.09  | 0.12 | 1.00 | 1.11  | 0.44 | 1.14 | 0.62 |
| 1     | 4.88  | 0.69 | 2.00  | 2.12  | 4-0.75              | 3.50             | 2.44 | 1.32  |                               | 1.06 | 1.36  | 0.12 | 1.06 | 1.38  | 0.50 | 1.41 | 0.69 |
| 1-1/4 | 5.25  | 0.81 | 2.50  | 2.50  | 4-0.75              | 3.88             | 2.62 | 1.66  |                               | 1.12 | 1.70  | 0.19 | 1.12 | 1.72  | 0.56 | 1.75 | 0.81 |
| 1-1/2 | 6.12  | 0.88 | 2.88  | 2.75  | 4-0.88              | 4.50             | 2.75 | 1.90  |                               | 1.25 | 1.95  | 0.25 | 1.25 | 1.97  | 0.62 | 1.99 | 0.88 |
| 2     | 6.50  | 1.00 | 3.62  | 3.31  | 8-0.75              | 5.00             | 2.88 | 2.38  |                               | 1.44 | 2.44  | 0.31 | 1.44 | 2.46  | 0.69 | 2.50 | 1.12 |
| 2-1/2 | 7.50  | 1.12 | 4.12  | 3.94  | 8-0.88              | 5.88             | 3.12 | 2.88  |                               | 1.62 | 2.94  | 0.31 | 1.62 | 2.97  | 0.75 | 3.00 | 1.25 |
| 3     | 8.25  | 1.25 | 5.00  | 4.62  | 8-0.88              | 6.62             | 3.25 | 3.50  |                               | 1.81 | 3.57  | 0.38 | 1.81 | 3.60  | 0.81 | 3.63 | 1.38 |
| 3-1/2 | 9.00  | 1.38 | 5.50  | 5.25  | 8-1.00              | 7.25             | 3.38 | 4.00  |                               | 1.94 | 4.07  | 0.38 | 1.94 | 4.10  | /    |      | 1.56 |
| 4     | 10.75 | 1.50 | 6.19  | 6.00  | 8-1.00              | 8.50             | 4.00 | 4.50  |                               | 2.12 | 4.57  | 0.44 | 2.12 | 4.60  |      |      | 1.62 |
| 5     | 13.00 | 1.75 | 7.31  | 7.44  | 8-1.12              | 10.50            | 4.50 | 5.56  |                               | 2.38 | 5.66  | 0.44 | 2.38 | 5.69  | /    |      | 1.88 |
| 6     | 14.00 | 1.88 | 8.50  | 8.75  | 12-1.12             | 11.50            | 4.62 | 6.63  |                               | 2.62 | 6.72  | 0.50 | 2.62 | 6.75  |      |      | 2.00 |
| 8     | 16.50 | 2.19 | 10.62 | 10.75 | 12-1.25             | 13.75            | 5.25 | 8.63  |                               | 3.00 | 8.72  | 0.50 | 3.00 | 8.75  | /    |      | 2.25 |
| 10    | 20.00 | 2.50 | 12.75 | 13.50 | 16-1.38             | 17.00            | 6.00 | 10.75 |                               | 3.38 | 10.88 | 0.50 | 4.38 | 10.92 |      |      | 2.56 |
| 12    | 22.00 | 2.62 | 15.00 | 15.75 | 20-1.38             | 19.25            | 6.12 | 12.75 |                               | 3.62 | 12.88 | 0.50 | 4.62 | 12.92 | /    |      | 2.75 |
| 14    | 23.75 | 2.75 | 16.25 | 17.00 | 20-1.50             | 20.75            | 6.50 | 14.00 |                               | 3.69 | 14.14 | 0.50 | 5.00 | 14.18 |      |      | 2.88 |
| 16    | 27.00 | 3.00 | 18.50 | 19.50 | 20-1.62             | 23.75            | 7.00 | 16.00 |                               | 4.19 | 16.16 | 0.50 | 5.50 | 16.19 | /    |      | 3.06 |
| 18    | 29.25 | 3.25 | 21.00 | 21.50 | 20-1.75             | 25.75            | 7.25 | 18.00 |                               | 4.62 | 18.18 | 0.50 | 6.00 | 18.20 |      |      | 3.12 |
| 20    | 32.00 | 3.50 | 23.00 | 24.00 | 24-1.75             | 28.50            | 7.50 | 20.00 |                               | 5.00 | 20.20 | 0.50 | 6.50 | 20.25 | /    |      | 3.25 |
| 22    | 34.25 | 3.75 | 25.25 | 26.25 | 24-1.75             | 30.63            | 7.75 | 22.00 |                               | 5.25 | 22.22 | 0.50 | 6.88 | 22.25 |      |      | --   |
| 24    | 37.00 | 4.00 | 27.25 | 28.25 | 24-2.00             | 33.00            | 8.00 | 24.00 |                               | 5.50 | 24.25 | 0.50 | 7.25 | 24.25 | /    |      | 3.62 |
|       |       |      |       |       |                     |                  |      |       |                               |      |       |      |      |       |      |      |      |

Dimensions in inches

- Sizes NPS 1/2 through 3-1/2 are same as Class 400 flanges.
- 1/4 in. raised face not included in dimensions T, L and L2.
- Bolt hole diameter 1/8 in. larger than bolt diameter.

## ANSI B16.5 Class 900 Flanges

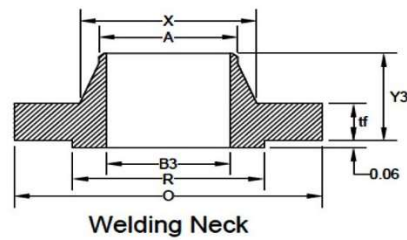


| Nom.<br>Pipe<br>Size                                | O     | T    | R     | X     | No.&<br>Dia. of<br>Holes | Bolt<br>Circle<br>Dia. | L2    | H     | B2                            | L    | B     | r    | L3    | B3    | THr  |
|-----------------------------------------------------|-------|------|-------|-------|--------------------------|------------------------|-------|-------|-------------------------------|------|-------|------|-------|-------|------|
| Sizes 1/2" Thru 2-1/2" Are Identical To Class 1500. |       |      |       |       |                          |                        |       |       |                               |      |       |      |       |       |      |
| 3                                                   | 9.50  | 1.50 | 5.00  | 5.00  | 8-1.00                   | 7.50                   | 4.00  | 3.50  | To be specified by purchaser. | 2.13 | 3.57  | 0.38 | 2.13  | 3.60  | 1.63 |
| 4                                                   | 11.50 | 1.75 | 6.19  | 6.25  | 8-1.25                   | 9.25                   | 4.50  | 4.50  |                               | 2.75 | 4.57  | 0.44 | 2.75  | 4.60  | 1.88 |
| 5                                                   | 13.75 | 2.00 | 7.31  | 7.50  | 8-1.38                   | 11.00                  | 5.00  | 5.56  |                               | 3.13 | 5.66  | 0.44 | 3.13  | 5.69  | 2.13 |
| 6                                                   | 15.00 | 2.19 | 8.50  | 9.25  | 12-1.25                  | 12.50                  | 5.50  | 6.63  |                               | 3.38 | 6.72  | 0.50 | 3.38  | 6.75  | 2.25 |
| 8                                                   | 18.50 | 2.50 | 10.63 | 11.75 | 12-1.50                  | 15.50                  | 6.38  | 8.63  |                               | 4.00 | 8.72  | 0.50 | 4.50  | 8.75  | 2.50 |
| 10                                                  | 21.50 | 2.75 | 12.75 | 14.50 | 16-1.50                  | 18.50                  | 7.25  | 10.75 |                               | 4.25 | 10.88 | 0.50 | 5.00  | 10.92 | 2.81 |
| 12                                                  | 24.00 | 3.13 | 15.00 | 16.50 | 20-1.50                  | 21.00                  | 7.88  | 12.75 |                               | 4.63 | 12.88 | 0.50 | 5.63  | 12.92 | 3.00 |
| 14                                                  | 25.25 | 3.38 | 16.25 | 17.75 | 20-1.63                  | 22.00                  | 8.38  | 14.00 |                               | 5.13 | 14.14 | 0.50 | 6.13  | 14.18 | 3.25 |
| 16                                                  | 27.75 | 3.50 | 18.50 | 20.00 | 20-1.75                  | 24.25                  | 8.50  | 16.00 |                               | 5.25 | 16.16 | 0.50 | 6.50  | 16.19 | 3.38 |
| 18                                                  | 31.00 | 4.00 | 21.00 | 22.25 | 20-2.00                  | 27.00                  | 9.00  | 18.00 |                               | 6.00 | 18.18 | 0.50 | 7.50  | 18.20 | 3.50 |
| 20                                                  | 33.75 | 4.25 | 23.00 | 24.50 | 20-2.13                  | 29.50                  | 9.75  | 20.00 |                               | 6.25 | 20.20 | 0.50 | 8.25  | 20.25 | 3.63 |
| 24                                                  | 41.00 | 5.50 | 27.25 | 29.50 | 20-2.63                  | 35.50                  | 11.50 | 24.00 |                               | 8.00 | 24.25 | 0.50 | 10.50 | 24.25 | 4.00 |

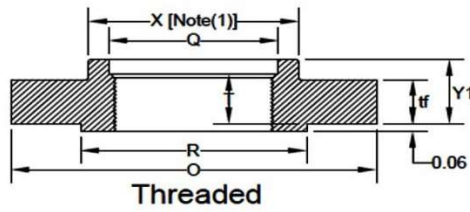
### Dimensions in inches

- Sizes NPS 1/2 through 2-1/2 are same as Class 1500 flanges.
- 1/4 in. raised face not included in dimensions T, L and L2.
- Bolt hole diameter 1/8 in. larger than bolt diameter.

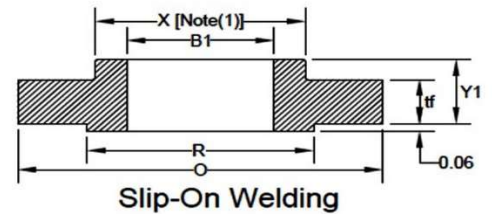
## ANSI B16.5 Class 1500 Flanges



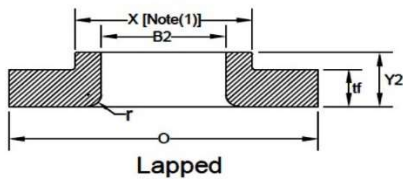
Welding Neck



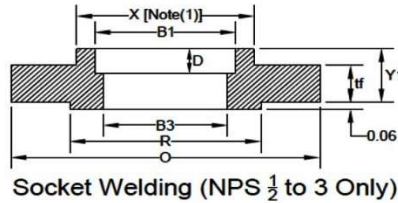
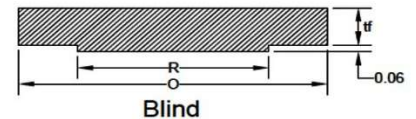
Threaded



Slip-On Welding



Lapped


Socket Welding (NPS  $\frac{1}{2}$  to 3 Only)


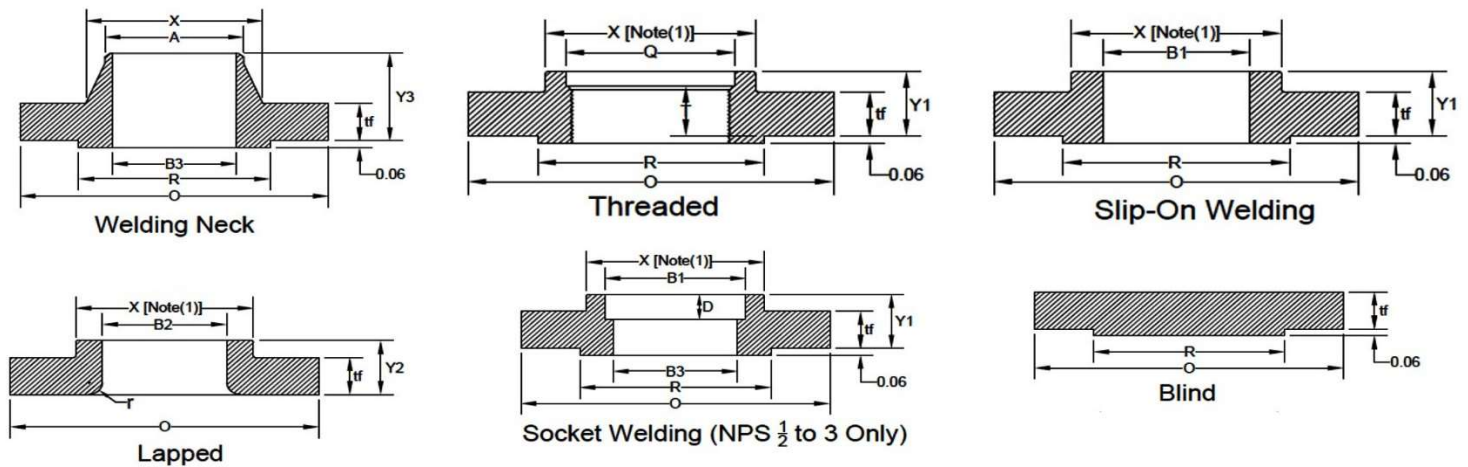
Blind

| NPS   | O     | T    | R     | X     | No. & Dia. of Holes | Bolt Circle Dia. | L2    | H     | B2                            | L    | B     | r    | L3    | D    | B3    | THr  |
|-------|-------|------|-------|-------|---------------------|------------------|-------|-------|-------------------------------|------|-------|------|-------|------|-------|------|
| 1/2   | 4.75  | 0.88 | 1.38  | 1.50  | 4-0.88              | 3.25             | 2.38  | 0.84  | To be specified by purchaser. | 1.25 | 0.88  | 0.13 | 1.25  | 0.38 | 0.90  | 0.88 |
| 3/4   | 5.13  | 1.00 | 1.69  | 1.75  | 4-0.88              | 3.50             | 2.75  | 1.05  |                               | 1.38 | 1.09  | 0.13 | 1.38  | 0.44 | 1.11  | 1.00 |
| 1     | 5.88  | 1.13 | 2.00  | 2.06  | 4-1.00              | 4.00             | 2.88  | 1.32  |                               | 1.63 | 1.36  | 0.13 | 1.63  | 0.50 | 1.38  | 1.13 |
| 1-1/4 | 6.25  | 1.13 | 2.50  | 2.50  | 4-1.00              | 4.38             | 2.88  | 1.66  |                               | 1.63 | 1.70  | 0.19 | 1.63  | 0.56 | 1.72  | 1.19 |
| 1-1/2 | 7.00  | 1.25 | 2.88  | 2.75  | 4-1.13              | 4.88             | 3.25  | 1.90  |                               | 1.75 | 1.95  | 0.25 | 1.75  | 0.63 | 1.97  | 1.25 |
| 2     | 8.50  | 1.50 | 3.63  | 4.13  | 8-1.00              | 6.50             | 4.00  | 2.38  |                               | 2.25 | 2.44  | 0.31 | 2.25  | 0.69 | 2.46  | 1.50 |
| 2-1/2 | 9.63  | 1.63 | 4.13  | 4.88  | 8-1.13              | 7.50             | 4.13  | 2.88  |                               | 2.50 | 2.94  | 0.31 | 2.50  | 0.75 | 2.97  | 1.88 |
| 3     | 10.50 | 1.88 | 5.00  | 5.25  | 8-1.25              | 8.00             | 4.63  | 3.50  |                               | 2.88 | 3.57  | 0.38 | 2.88  | --   | 3.60  | 2.00 |
| 4     | 12.25 | 2.13 | 6.19  | 6.38  | 8-1.38              | 9.50             | 4.88  | 4.50  |                               | 3.56 | 4.57  | 0.44 | 3.56  | --   | 4.60  | 2.25 |
| 5     | 14.75 | 2.88 | 7.31  | 7.75  | 8-1.63              | 11.50            | 6.13  | 5.56  |                               | 4.13 | 5.66  | 0.44 | 4.13  | --   | 5.69  | 2.50 |
| 6     | 15.50 | 3.25 | 8.50  | 9.00  | 12-1.50             | 12.50            | 6.75  | 6.63  |                               | 4.69 | 6.72  | 0.50 | 4.69  | --   | 6.75  | 2.75 |
| 8     | 19.00 | 3.63 | 10.63 | 11.50 | 12-1.75             | 15.50            | 8.38  | 8.63  |                               | 5.63 | 8.72  | 0.50 | 5.63  | --   | 8.75  | 3.00 |
| 10    | 23.00 | 4.25 | 12.75 | 14.50 | 12-2.00             | 19.00            | 10.00 | 10.75 |                               | 6.25 | 10.88 | 0.50 | 7.00  | --   | 10.92 | 3.31 |
| 12    | 26.50 | 4.88 | 15.00 | 17.75 | 16-2.13             | 22.50            | 11.13 | 12.75 |                               | 7.13 | 12.88 | 0.50 | 8.63  | --   | 12.92 | 3.63 |
| 14    | 29.50 | 5.25 | 16.25 | 19.50 | 16-2.38             | 25.00            | 11.75 | 14.00 |                               | --   | --    | 0.50 | 9.50  | --   | 14.18 | --   |
| 16    | 32.50 | 5.75 | 18.50 | 21.75 | 16-2.63             | 27.75            | 12.25 | 16.00 |                               | --   | --    | 0.50 | 10.25 | --   | 16.19 | --   |
| 18    | 36.00 | 6.38 | 21.00 | 23.50 | 16-2.88             | 30.50            | 12.88 | 18.00 |                               | --   | --    | 0.50 | 10.88 | --   | 18.20 | --   |
| 20    | 38.75 | 7.00 | 23.00 | 25.25 | 16-3.13             | 32.75            | 14.00 | 20.00 |                               | --   | --    | 0.50 | 11.50 | --   | 20.25 | --   |
| 24    | 46.00 | 8.00 | 27.25 | 30.00 | 16-3.63             | 39.00            | 16.00 | 24.00 |                               | --   | --    | 0.50 | 13.00 | --   | 24.25 | --   |

### Dimensions in inches

- 1/4 in. raised face not included in dimensions T, L and L2.
- Bolt hole diameter 1/8 in. larger than bolt diameter.

## ANSI B16.5 Class 2500 Flanges



| Nom. Pipe Size | O     | T    | R     | X     | No. & Dia. of Holes | Bolt Circle Dia. | L2    | H     | B2                            | L     | B     | r    | L3    | B3    | THr  |
|----------------|-------|------|-------|-------|---------------------|------------------|-------|-------|-------------------------------|-------|-------|------|-------|-------|------|
| 1/2            | 5.25  | 1.19 | 1.38  | 1.69  | 4-0.88              | 3.50             | 2.88  | 0.84  | To be specified by purchaser. | 1.56  | 0.88  | 0.13 | 1.56  | 0.90  | 1.13 |
| 3/4            | 5.50  | 1.25 | 1.69  | 2.00  | 4-0.88              | 3.75             | 3.13  | 1.05  |                               | 1.69  | 1.09  | 0.13 | 1.69  | 1.11  | 1.25 |
| 1              | 6.25  | 1.38 | 2.00  | 2.25  | 4-1.00              | 4.25             | 3.50  | 1.32  |                               | 1.88  | 1.36  | 0.13 | 1.88  | 1.38  | 1.38 |
| 1-1/4          | 7.25  | 1.50 | 2.50  | 2.88  | 4-1.13              | 5.13             | 3.75  | 1.66  |                               | 2.06  | 1.70  | 0.18 | 2.06  | 1.72  | 1.50 |
| 1-1/2          | 8.00  | 1.75 | 2.88  | 3.13  | 4-1.25              | 5.75             | 4.38  | 1.90  |                               | 2.38  | 1.95  | 0.25 | 2.38  | 1.97  | 1.75 |
| 2              | 9.25  | 2.00 | 3.63  | 3.75  | 8-1.13              | 6.75             | 5.00  | 2.38  |                               | 2.75  | 2.44  | 0.31 | 2.75  | 2.46  | 2.00 |
| 2-1/2          | 10.50 | 2.25 | 4.13  | 4.50  | 8-1.25              | 7.75             | 5.63  | 2.88  |                               | 3.13  | 2.94  | 0.31 | 3.13  | 2.97  | 2.25 |
| 3              | 12.00 | 2.63 | 5.00  | 5.25  | 8-1.38              | 9.00             | 6.63  | 3.50  |                               | 3.63  | 3.57  | 0.37 | 3.63  | 3.60  | 2.50 |
| 4              | 14.00 | 3.00 | 6.19  | 6.50  | 8-1.63              | 10.75            | 7.50  | 4.50  |                               | 4.25  | 4.57  | 0.44 | 4.25  | 4.60  | 2.75 |
| 5              | 16.50 | 3.63 | 7.31  | 8.00  | 8-1.88              | 12.75            | 9.00  | 5.56  |                               | 5.13  | 5.66  | 0.44 | 5.13  | 5.69  | 3.00 |
| 6              | 19.00 | 4.25 | 8.50  | 9.25  | 8-2.13              | 14.50            | 10.75 | 6.63  |                               | 6.00  | 6.72  | 0.50 | 6.00  | 6.75  | 3.25 |
| 8              | 21.75 | 5.00 | 10.63 | 12.00 | 12-2.13             | 17.25            | 12.50 | 8.63  |                               | 7.00  | 8.72  | 0.50 | 7.00  | 8.75  | 3.75 |
| 10             | 26.50 | 6.50 | 12.75 | 14.75 | 12-2.63             | 21.25            | 16.50 | 10.75 |                               | 9.00  | 10.88 | 0.50 | 9.00  | 10.92 | 4.25 |
| 12             | 30.00 | 7.25 | 15.00 | 17.38 | 12-2.88             | 24.38            | 18.25 | 12.75 |                               | 10.00 | 12.88 | 0.50 | 10.00 | 12.92 | 4.75 |

### Dimensions in inches

- 1/4 in. raised face not included in dimensions T, L and L2.
- Bolt hole diameter 1/8 in. larger than bolt diameter.

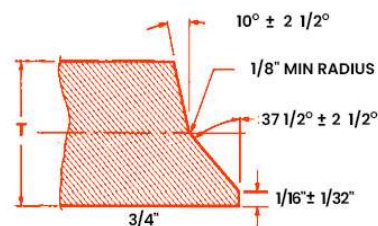
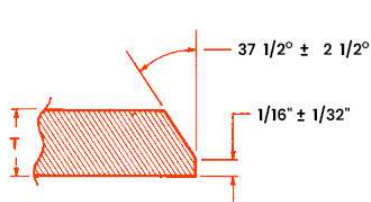
## Dimension Tolerance **ANSI B16.5**

| Threaded, Socket-Welding, Slip-On, Lap Joint & Blind |                                               |              |                               |                |
|------------------------------------------------------|-----------------------------------------------|--------------|-------------------------------|----------------|
| Outside Diameter<br>*                                | 6" and below                                  |              | ±1.5mm                        |                |
|                                                      | 8" ~ 24"                                      |              | ±2.0mm                        |                |
|                                                      | over 24"                                      |              | ±3.0mm                        |                |
| Inside Diameter                                      | Threaded                                      |              | Within limits on boring gauge |                |
|                                                      | Socket-Welding, Slip-On and Lap-Joint         |              | 2-1/2" and below              | +0.5mm<br>-0mm |
|                                                      |                                               |              | 3" ~ 10"                      | +0.8mm<br>-0mm |
|                                                      |                                               |              | 12" and above                 | +1.6mm<br>-0mm |
| Outside Diameter of Hub<br>*                         | 1/2" ~ 24"                                    |              | +3.0mm<br>-1.0mm              |                |
| Diameter of Contact Face                             | 1/16" Raised Face                             |              | ±0.8mm                        |                |
|                                                      | 1/4" Raised Face Tongue & Groove Male, Female |              | ±0.5mm                        |                |
| Diameter of Counter Bore                             | Same as for Inside Diameter                   |              |                               |                |
| Drilling                                             | Bore                                          | 6" and below | ±1.0mm                        |                |
|                                                      |                                               | 8" ~ 24"     | ±1.6mm                        |                |
|                                                      | Eccentricity of Bore                          |              | ±0.8mm                        |                |
|                                                      | Diameter of Bolt Hole                         |              | ±0.5mm                        |                |
|                                                      | Bolt hole spacing 24" and above               |              | ±0.8mm                        |                |
| Thickness                                            | 1/2" ~ 4"                                     |              | +1.6mm -0mm                   |                |
|                                                      | 5" ~ 12"                                      |              | +2.0mm -0mm                   |                |
|                                                      | 14" ~ 18"                                     |              | +3.0mm -0mm                   |                |
|                                                      | 20" and above                                 |              | +4.0mm -0mm                   |                |
| Length Through the Hub *                             | 1/2" ~ 10"                                    |              | ±1.6mm                        |                |
|                                                      | 12" and above                                 |              | ±3.0mm                        |                |

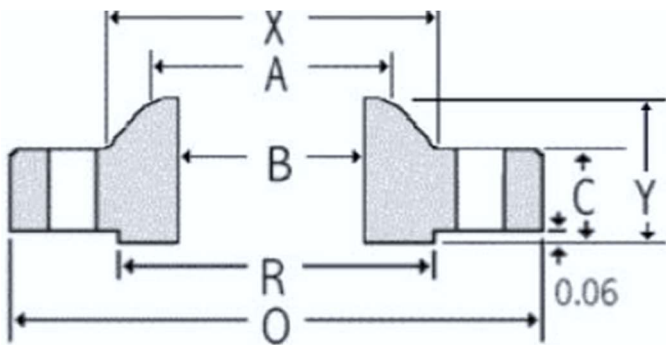
| Weld Neck                           |                                               |                  |             |
|-------------------------------------|-----------------------------------------------|------------------|-------------|
| Outside Diameter *                  | 6" and below                                  | ±1.5mm           |             |
|                                     | 8" ~ 24"                                      | ±2.0mm           |             |
|                                     | over 24"                                      | ±3.0mm           |             |
| Inside Diameter                     | 1/2" ~ 10"                                    | +0.8mm<br>-0mm   |             |
|                                     | 12" ~ 18"                                     | ±1.6mm           |             |
|                                     | 20" and above                                 | +3.2mm<br>-1.6mm |             |
| Diameter of Hub at Base *           | 1/2" ~ 24"                                    | +3.0mm<br>-1.0mm |             |
| Diameter of Contact Face            | 1/16" Raised Face                             | ±0.8mm           |             |
|                                     | 1/4" Raised Face Tongue & Groove Male, Female | ±0.5mm           |             |
| Diameter of Hub at Point of Welding | 1/2" ~ 5"                                     | +2.4mm<br>-0.8mm |             |
|                                     | 6" and above                                  | +4.0mm<br>-0.8mm |             |
| Drilling                            | Bore                                          | 6" and below     | ±1.0mm      |
|                                     |                                               | 8" ~ 24"         | ±1.6mm      |
|                                     | Eccentricity of Bore                          |                  | ±0.8mm      |
|                                     | Diameter of Bolt Hole                         |                  | ±0.5mm      |
|                                     | Bolt hole spacing 24" and above               |                  | ±0.8mm      |
| Thickness                           | 1/2" ~ 4"                                     |                  | +1.6mm -0mm |
|                                     | 5" ~ 12"                                      |                  | +2.0mm -0mm |
|                                     | 14" ~ 18"                                     |                  | +3.0mm -0mm |
|                                     | 20" and above                                 |                  | +4.0mm -0mm |
| Length Through the Hub              | 1/2" ~ 10"                                    |                  | ±1.6mm      |
|                                     | 12" and above                                 |                  | ±3.0mm      |

\* Tolerances not listed in B16.5

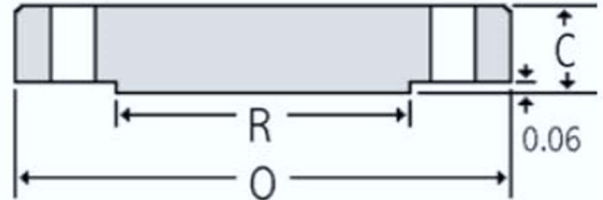
### Welding Bevel Standards



## ANSI B16.47 Series A Class 150 Flanges



Weld Neck

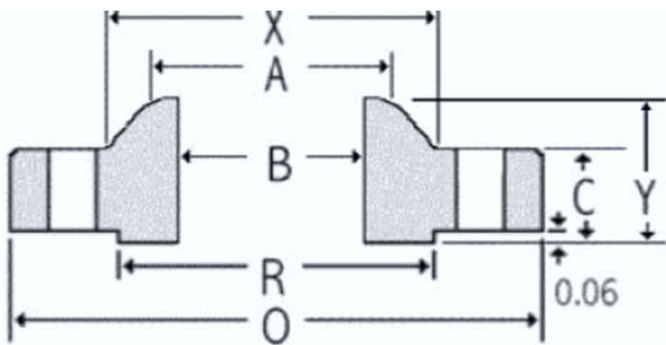
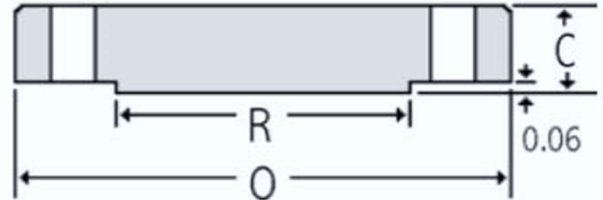


Blind

| Nom.<br>Pipe<br>Size | Thickness |              |       |       |                |                               |      |              | Drilling       |              |            | Weight       |       |
|----------------------|-----------|--------------|-------|-------|----------------|-------------------------------|------|--------------|----------------|--------------|------------|--------------|-------|
|                      | OD        | Weld<br>Neck | Blind | OD RF | Dia at<br>Base | Bore                          | LTH  | Dia<br>Bevel | Bolt<br>Circle | Dia<br>Holes | #<br>Holes | Weld<br>Neck | Blind |
|                      | O         | C            | C     | R     | X              | B                             | Y    | A            |                |              |            |              |       |
| <b>26</b>            | 34.25     | 2.69         | 2.69  | 29.50 | 26.62          | To be specified by purchaser. | 4.75 | 26.00        | 31.75          | 1.38         | 24.00      | 300          | 702   |
| <b>28</b>            | 36.50     | 2.81         | 2.81  | 31.50 | 28.62          |                               | 4.94 | 28.00        | 34.00          | 1.38         | 28.00      | 345          | 833   |
| <b>30</b>            | 38.75     | 2.94         | 2.94  | 33.75 | 30.75          |                               | 5.38 | 30.00        | 36.00          | 1.38         | 28.00      | 400          | 982   |
| <b>32</b>            | 41.75     | 3.19         | 3.19  | 36.00 | 32.75          |                               | 5.69 | 32.00        | 38.50          | 1.62         | 28.00      | 505          | 1237  |
| <b>34</b>            | 43.75     | 3.25         | 3.25  | 38.00 | 34.75          |                               | 5.88 | 34.00        | 40.50          | 1.62         | 32.00      | 540          | 1384  |
| <b>36</b>            | 46.00     | 3.56         | 3.56  | 40.25 | 36.75          |                               | 6.19 | 36.00        | 42.75          | 1.62         | 32.00      | 640          | 1676  |
| <b>38</b>            | 48.75     | 3.44         | 3.44  | 42.25 | 39.00          |                               | 6.19 | 38.00        | 45.25          | 1.62         | 32.00      | 720          | 1819  |
| <b>40</b>            | 50.75     | 3.56         | 3.56  | 44.25 | 41.00          |                               | 6.44 | 40.00        | 47.25          | 1.62         | 36.00      | 775          | 2040  |
| <b>42</b>            | 53.00     | 3.81         | 3.81  | 47.00 | 43.00          |                               | 6.75 | 42.00        | 49.50          | 1.62         | 36.00      | 890          | 2381  |
| <b>44</b>            | 55.25     | 4.00         | 4.00  | 49.00 | 45.00          |                               | 7.00 | 44.00        | 51.75          | 1.62         | 40.00      | 990          | 2717  |
| <b>46</b>            | 57.25     | 4.06         | 4.06  | 51.00 | 47.12          |                               | 7.31 | 46.00        | 53.75          | 1.62         | 40.00      | 1060         | 2961  |
| <b>48</b>            | 59.50     | 4.25         | 4.25  | 53.50 | 49.12          |                               | 7.56 | 48.00        | 56.00          | 1.62         | 44.00      | 1185         | 3348  |
| <b>50</b>            | 61.75     | 4.38         | 4.38  | 55.50 | 51.25          |                               | 8.00 | 50.00        | 58.25          | 1.88         | 44.00      | 1270         | 3716  |
| <b>52</b>            | 64.00     | 4.56         | 4.56  | 57.50 | 53.25          |                               | 8.25 | 52.00        | 60.50          | 1.88         | 44.00      | 1410         | 4156  |
| <b>54</b>            | 66.25     | 4.75         | 4.75  | 59.50 | 55.25          |                               | 8.50 | 54.00        | 62.75          | 1.88         | 44.00      | 1585         | 4639  |
| <b>56</b>            | 68.75     | 4.88         | 4.88  | 62.00 | 57.38          |                               | 9.00 | 56.00        | 65.00          | 1.88         | 48.00      | 1760         | 5132  |
| <b>58</b>            | 71.00     | 5.06         | 5.06  | 64.00 | 59.38          |                               | 9.25 | 58.00        | 67.25          | 1.88         | 48.00      | 1915         | 5675  |
| <b>60</b>            | 73.00     | 5.19         | 5.19  | 66.00 | 61.38          |                               | 9.44 | 60.00        | 69.25          | 1.88         | 52.00      | 2045         | 6154  |

Dimensions in inches. / Weight in pounds.

## ANSI B16.47 Series A Class 300 Flanges

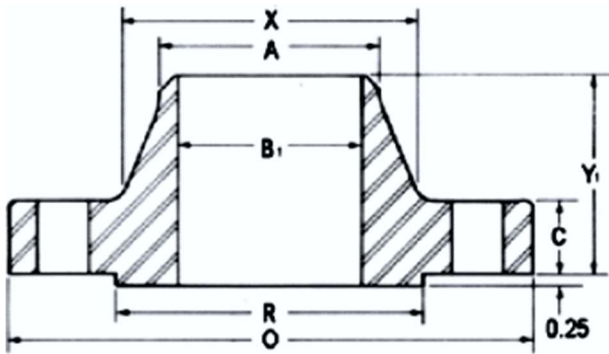

**Weld Neck**

**Blind**

| Nom.<br>Pipe<br>Size | Thickness |              |       |       |             |                               |       |              | Drilling       |              |            | Weight       |       |
|----------------------|-----------|--------------|-------|-------|-------------|-------------------------------|-------|--------------|----------------|--------------|------------|--------------|-------|
|                      | OD        | Weld<br>Neck | Blind | ODRF  | Dia at Base | Bore                          | LTH   | Dia<br>Bevel | Bolt<br>Circle | Dia<br>Holes | #<br>Holes | Weld<br>Neck | Blind |
|                      | O         | C            | C     | R     | X           | B                             | Y     | A            |                |              |            |              |       |
| <b>26</b>            | 38.25     | 3.12         | 3.31  | 29.50 | 28.38       | To be specified by purchaser. | 7.25  | 26.00        | 34.50          | 1.75         | 28.00      | 605          | 1078  |
| <b>28</b>            | 40.75     | 3.38         | 3.56  | 31.50 | 30.50       |                               | 7.75  | 28.00        | 37.00          | 1.75         | 28.00      | 745          | 1315  |
| <b>30</b>            | 43.00     | 3.62         | 3.75  | 33.75 | 32.56       |                               | 8.25  | 30.00        | 39.25          | 1.88         | 28.00      | 870          | 1543  |
| <b>32</b>            | 45.25     | 3.88         | 3.94  | 36.00 | 34.69       |                               | 8.75  | 32.00        | 41.50          | 2.00         | 28.00      | 1005         | 1795  |
| <b>34</b>            | 47.50     | 4.00         | 4.12  | 38.00 | 36.88       |                               | 9.12  | 34.00        | 43.50          | 2.00         | 28.00      | 1145         | 2068  |
| <b>36</b>            | 50.00     | 4.12         | 4.38  | 40.25 | 39.00       |                               | 9.50  | 36.00        | 46.00          | 2.12         | 32.00      | 1275         | 2436  |
| <b>38</b>            | 46.00     | 4.25         | 4.25  | 40.50 | 39.12       |                               | 7.12  | 38.00        | 43.00          | 1.62         | 32.00      | 695          | 2001  |
| <b>40</b>            | 48.75     | 4.50         | 4.50  | 42.75 | 41.25       |                               | 7.62  | 40.00        | 45.50          | 1.75         | 32.00      | 840          | 2380  |
| <b>42</b>            | 50.75     | 4.69         | 4.69  | 44.75 | 43.25       |                               | 7.88  | 42.00        | 47.50          | 1.75         | 32.00      | 950          | 2688  |
| <b>44</b>            | 53.25     | 4.88         | 4.88  | 47.00 | 45.25       |                               | 8.12  | 44.00        | 49.75          | 1.88         | 32.00      | 1055         | 3079  |
| <b>46</b>            | 55.75     | 5.06         | 5.06  | 49.00 | 47.38       |                               | 8.50  | 46.00        | 52.00          | 2.00         | 28.00      | 1235         | 3499  |
| <b>48</b>            | 57.75     | 5.25         | 5.25  | 51.25 | 49.38       |                               | 8.81  | 48.00        | 54.00          | 2.00         | 32.00      | 1380         | 3896  |
| <b>50</b>            | 60.25     | 5.50         | 5.50  | 53.50 | 51.38       |                               | 9.12  | 50.00        | 56.25          | 2.12         | 32.00      | 1530         | 4442  |
| <b>52</b>            | 62.25     | 5.69         | 5.69  | 55.50 | 53.38       |                               | 9.38  | 52.00        | 58.25          | 2.12         | 32.00      | 1660         | 4906  |
| <b>54</b>            | 65.25     | 6.00         | 6.00  | 57.75 | 55.50       |                               | 9.94  | 54.00        | 61.00          | 2.38         | 28.00      | 2050         | 5684  |
| <b>56</b>            | 67.25     | 6.06         | 6.06  | 59.75 | 57.62       |                               | 10.25 | 56.00        | 63.00          | 2.38         | 28.00      | 2155         | 6098  |
| <b>58</b>            | 69.25     | 6.25         | 6.25  | 62.00 | 59.62       |                               | 10.50 | 58.00        | 65.00          | 2.38         | 32.00      | 2270         | 6669  |
| <b>60</b>            | 71.25     | 6.44         | 6.44  | 64.00 | 61.62       |                               | 10.75 | 60.00        | 67.00          | 2.38         | 32.00      | 2470         | 7274  |

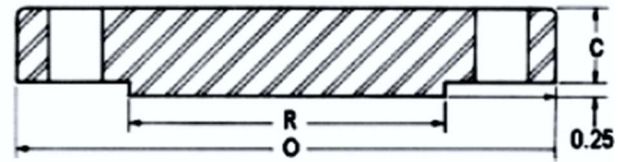
Dimensions in inches. / Weight in pounds.

**Note:** Larger sizes as well as intermediate sizes can be furnished.

## ANSI B16.47 Series A Class 400 Flanges



**Weld Neck Flange**



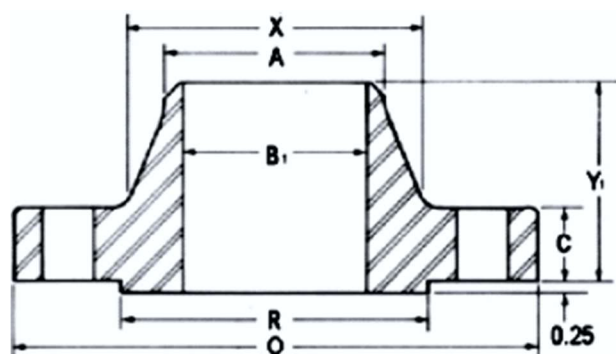
**Blind Flange**

| Nom.<br>Pipe Size | Thickness |           |       |       |             |           |       | Drilling    |         |           | Weight    |       |
|-------------------|-----------|-----------|-------|-------|-------------|-----------|-------|-------------|---------|-----------|-----------|-------|
|                   | OD        | Weld Neck | Blind | LTH   | Dia at Base | Dia Bevel | OD RF | Bolt Circle | # Holes | Dia Holes | Weld Neck | Blind |
|                   | O         | C         | C     | Y     | X           | A         | R     |             |         |           |           |       |
| <b>26</b>         | 38.25     | 3.50      | 3.88  | 7.62  | 28.62       | 26.00     | 29.50 | 34.50       | 28.00   | 1.88      | 650       | 1263  |
| <b>28</b>         | 40.75     | 3.75      | 4.12  | 8.12  | 30.81       | 28.00     | 31.50 | 37.00       | 28.00   | 2.00      | 785       | 1522  |
| <b>30</b>         | 43.00     | 4.00      | 4.38  | 8.62  | 32.94       | 30.00     | 33.75 | 39.25       | 28.00   | 2.12      | 905       | 1802  |
| <b>32</b>         | 45.25     | 4.25      | 4.56  | 9.12  | 35.00       | 32.00     | 36.00 | 41.50       | 28.00   | 2.12      | 1065      | 2077  |
| <b>34</b>         | 47.50     | 4.38      | 4.81  | 9.50  | 37.19       | 34.00     | 38.00 | 43.50       | 28.00   | 2.12      | 1200      | 2415  |
| <b>36</b>         | 50.00     | 4.50      | 5.06  | 9.88  | 39.38       | 36.00     | 40.25 | 46.00       | 32.00   | 2.12      | 1340      | 2815  |
| <b>38</b>         | 47.50     | 4.88      | 4.88  | 8.12  | 39.50       | 38.00     | 40.75 | 44.00       | 32.00   | 1.88      | 935       | 2450  |
| <b>40</b>         | 50.00     | 5.12      | 5.12  | 8.50  | 41.50       | 40.00     | 43.00 | 46.25       | 32.00   | 2.00      | 1090      | 2848  |
| <b>42</b>         | 52.00     | 5.25      | 5.25  | 8.81  | 43.62       | 42.00     | 45.00 | 48.25       | 32.00   | 2.00      | 1190      | 3159  |
| <b>44</b>         | 54.50     | 5.50      | 5.50  | 9.18  | 45.62       | 44.00     | 47.25 | 50.50       | 32.00   | 2.12      | 1375      | 3635  |
| <b>46</b>         | 56.75     | 5.75      | 5.75  | 9.62  | 47.75       | 46.00     | 49.50 | 52.75       | 36.00   | 2.12      | 1525      | 4120  |
| <b>48</b>         | 59.50     | 6.00      | 6.00  | 10.12 | 49.88       | 48.00     | 51.50 | 55.25       | 28.00   | 2.38      | 1790      | 4726  |
| <b>50</b>         | 61.75     | 6.19      | 6.25  | 10.56 | 52.00       | 50.00     | 53.62 | 57.50       | 32.00   | 2.38      | 1950      | 5303  |
| <b>52</b>         | 63.75     | 6.38      | 6.44  | 10.88 | 54.00       | 52.00     | 55.62 | 59.50       | 32.00   | 2.38      | 2125      | 5823  |
| <b>54</b>         | 67.00     | 6.69      | 6.75  | 11.38 | 56.12       | 54.00     | 57.88 | 62.25       | 28.00   | 2.62      | 2565      | 6742  |
| <b>56</b>         | 69.00     | 6.88      | 6.94  | 11.75 | 58.25       | 56.00     | 60.12 | 64.25       | 32.00   | 2.62      | 2710      | 7352  |
| <b>58</b>         | 71.00     | 7.00      | 7.12  | 12.06 | 60.25       | 58.00     | 62.12 | 66.25       | 32.00   | 2.62      | 3230      | 7986  |
| <b>60</b>         | 74.25     | 7.31      | 7.44  | 12.56 | 62.38       | 60.00     | 64.38 | 69.00       | 32.00   | 2.88      | 3820      | 9126  |

Dimensions in inches. / Weight in pounds.

**Note:** Larger sizes as well as intermediate sizes can be furnished.

## ANSI B16.47 Series A Class 600 Flanges



**Weld Neck Flange**



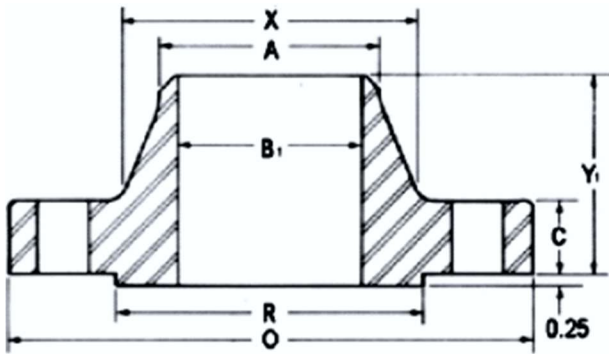
**Blind Flange**

| Nom.<br>Pipe Size | Thickness |           |       |       |             |           |       | Drilling    |         |           | Weight    |       |
|-------------------|-----------|-----------|-------|-------|-------------|-----------|-------|-------------|---------|-----------|-----------|-------|
|                   | OD        | Weld Neck | Blind | LTH   | Dia at Base | Dia Bevel | OD RF | Bolt Circle | # Holes | Dia Holes | Weld Neck | Blind |
|                   | O         | C         | C     | Y     | X           | A         | R     |             |         |           |           |       |
| <b>26</b>         | 40.00     | 4.25      | 4.94  | 8.75  | 29.44       | 26.00     | 29.50 | 36.00       | 28.00   | 2.00      | 940       | 1759  |
| <b>28</b>         | 42.25     | 4.38      | 5.19  | 9.25  | 31.62       | 28.00     | 31.50 | 38.00       | 28.00   | 2.12      | 1060      | 2061  |
| <b>30</b>         | 44.50     | 4.50      | 5.50  | 9.75  | 33.94       | 30.00     | 33.75 | 40.25       | 28.00   | 2.12      | 1210      | 2423  |
| <b>32</b>         | 47.00     | 4.62      | 5.81  | 10.25 | 36.12       | 32.00     | 36.00 | 42.50       | 28.00   | 2.38      | 1375      | 2856  |
| <b>34</b>         | 49.00     | 4.75      | 6.06  | 10.62 | 38.31       | 34.00     | 38.00 | 44.50       | 28.00   | 2.38      | 1540      | 3237  |
| <b>36</b>         | 51.75     | 4.88      | 6.38  | 11.12 | 40.62       | 36.00     | 40.25 | 47.00       | 28.00   | 2.62      | 1705      | 3802  |
| <b>38</b>         | 50.00     | 6.00      | 6.12  | 10.00 | 40.25       | 38.00     | 41.50 | 45.75       | 28.00   | 2.38      | 1470      | 3404  |
| <b>40</b>         | 52.00     | 6.25      | 6.38  | 10.38 | 42.25       | 40.00     | 43.75 | 47.75       | 32.00   | 2.38      | 1630      | 3838  |
| <b>42</b>         | 55.25     | 6.62      | 6.75  | 11.00 | 44.38       | 42.00     | 46.00 | 50.50       | 28.00   | 2.62      | 2030      | 4585  |
| <b>44</b>         | 57.25     | 6.81      | 7.00  | 11.38 | 46.50       | 44.00     | 48.25 | 52.50       | 32.00   | 2.62      | 2160      | 5105  |
| <b>46</b>         | 59.50     | 7.06      | 7.31  | 11.81 | 48.62       | 46.00     | 50.25 | 54.75       | 32.00   | 2.62      | 2410      | 5758  |
| <b>48</b>         | 62.75     | 7.44      | 7.69  | 12.44 | 50.75       | 48.00     | 52.50 | 57.50       | 32.00   | 2.88      | 2855      | 6737  |
| <b>50</b>         | 65.75     | 7.75      | 8.00  | 12.94 | 52.88       | 50.00     | 54.50 | 60.00       | 28.00   | 3.12      | 3330      | 7695  |
| <b>52</b>         | 67.75     | 8.00      | 8.25  | 13.25 | 54.88       | 52.00     | 56.50 | 62.00       | 32.00   | 3.12      | 3560      | 8426  |
| <b>54</b>         | 70.00     | 8.25      | 8.56  | 13.75 | 57.00       | 54.00     | 58.75 | 64.25       | 32.00   | 3.12      | 3920      | 9333  |
| <b>56</b>         | 73.00     | 8.56      | 8.88  | 14.25 | 59.12       | 56.00     | 60.75 | 66.75       | 32.00   | 3.38      | 4280      | 10529 |
| <b>58</b>         | 75.00     | 8.75      | 9.12  | 14.56 | 61.12       | 58.00     | 63.00 | 68.75       | 32.00   | 3.38      | 4640      | 11414 |
| <b>60</b>         | 78.50     | 9.19      | 9.56  | 15.31 | 63.38       | 60.00     | 65.25 | 71.75       | 28.00   | 3.62      | 5000      | 13108 |

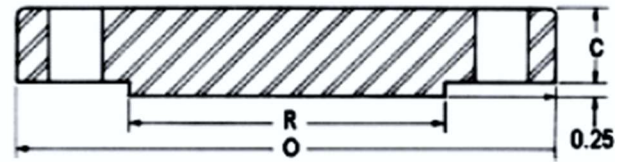
Dimensions in inches. / Weight in pounds.

**Note:** Larger sizes as well as intermediate sizes can be furnished.

## ANSI B16.47 Series A Class 900 Flanges



Weld Neck Flange



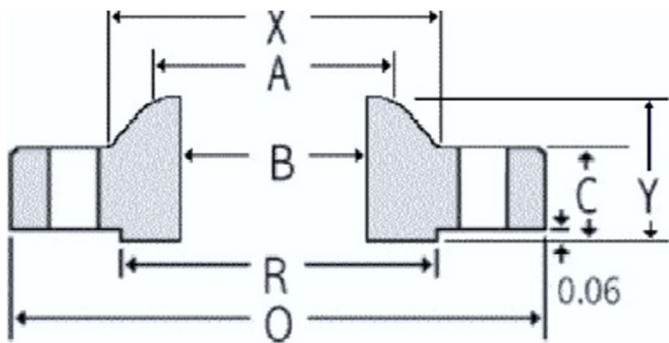
Blind Flange

| Nom.<br>Pipe<br>Size | Thickness |           |       |       |             |           |       | Drilling    |         |           | Weight    |        |
|----------------------|-----------|-----------|-------|-------|-------------|-----------|-------|-------------|---------|-----------|-----------|--------|
|                      | OD        | Weld Neck | Blind | LTH   | Dia at Base | Dia Bevel | OD RF | Bolt Circle | # Holes | Dia Holes | Weld Neck | Blind  |
|                      | O         | C         | C     | Y     | X           | A         | R     |             |         |           |           |        |
| <b>26</b>            | 42.75     | 5.50      | 6.31  | 11.25 | 30.50       | 26.00     | 29.50 | 37.50       | 20.00   | 2.88      | 1,525     | 2,566  |
| <b>28</b>            | 46.00     | 5.62      | 6.75  | 11.75 | 32.75       | 28.00     | 31.50 | 40.25       | 20.00   | 3.12      | 1,810     | 3,178  |
| <b>30</b>            | 48.50     | 5.88      | 7.18  | 12.25 | 35.00       | 30.00     | 33.75 | 42.75       | 20.00   | 3.12      | 2,120     | 3,758  |
| <b>32</b>            | 51.75     | 6.25      | 7.62  | 13.00 | 37.25       | 32.00     | 36.00 | 45.50       | 20.00   | 3.38      | 2,545     | 4,541  |
| <b>34</b>            | 55.00     | 6.50      | 8.06  | 13.75 | 39.62       | 34.00     | 38.00 | 48.25       | 20.00   | 3.62      | 2,970     | 5,425  |
| <b>36</b>            | 57.50     | 6.75      | 8.44  | 14.25 | 41.88       | 36.00     | 40.25 | 50.75       | 20.00   | 3.62      | 3,395     | 6,209  |
| <b>38</b>            | 57.50     | 7.50      | 8.50  | 13.88 | 42.25       | 38.00     | 43.25 | 50.75       | 20.00   | 3.62      | 3,385     | 6,253  |
| <b>40</b>            | 59.50     | 7.75      | 8.81  | 14.31 | 44.38       | 40.00     | 45.75 | 52.75       | 24.00   | 3.62      | 3,620     | 6,940  |
| <b>42</b>            | 61.50     | 8.12      | 9.12  | 14.62 | 46.31       | 42.00     | 47.75 | 54.75       | 24.00   | 3.62      | 3,960     | 7,675  |
| <b>44</b>            | 64.88     | 8.44      | 9.56  | 15.38 | 48.62       | 44.00     | 50.00 | 57.62       | 24.00   | 3.88      | 4,300     | 8,954  |
| <b>46</b>            | 68.25     | 8.88      | 10.06 | 16.18 | 50.88       | 46.00     | 52.50 | 60.50       | 24.00   | 4.12      | 4,640     | 10,426 |
| <b>48</b>            | 70.25     | 9.19      | 10.38 | 16.50 | 52.88       | 48.00     | 54.50 | 62.50       | 24.00   | 4.12      | 4,980     | 11,398 |

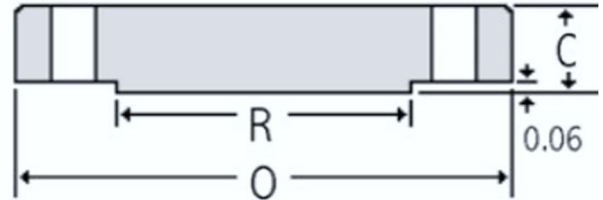
Dimensions in inches. / Weight in pounds.

**Note:** Larger sizes as well as intermediate sizes can be furnished.

## ANSI B16.47 Series B Class 75 Flanges



Weld Neck



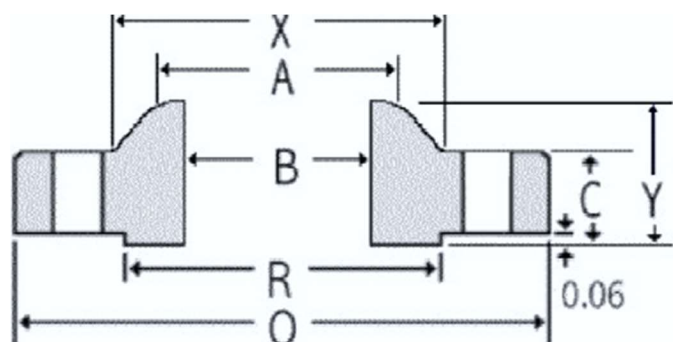
Blind

| Nom.<br>Pipe<br>Size | Thickness |              |       |       |                |                               |      |              | Drilling       |              |            | Weight       |       |
|----------------------|-----------|--------------|-------|-------|----------------|-------------------------------|------|--------------|----------------|--------------|------------|--------------|-------|
|                      | OD        | Weld<br>Neck | Blind | OD RF | Dia at<br>Base | Bore                          | LTH  | Dia<br>Bevel | Bolt<br>Circle | Dia<br>Holes | #<br>Holes | Weld<br>Neck | Blind |
|                      | O         | C            | C     | R     | X              | B                             | Y    | A            |                |              |            |              |       |
| <b>26</b>            | 30.00     | 1.31         | 1.31  | 27.75 | 26.62          | To be specified by purchaser. | 2.31 | 26.06        | 28.50          | 0.75         | 36.00      | 80           | 255   |
| <b>28</b>            | 32.00     | 1.31         | 1.31  | 29.75 | 28.62          |                               | 2.44 | 28.06        | 30.50          | 0.75         | 40.00      | 85           | 290   |
| <b>30</b>            | 34.00     | 1.31         | 1.31  | 31.75 | 30.62          |                               | 2.56 | 30.06        | 32.50          | 0.75         | 44.00      | 90           | 330   |
| <b>32</b>            | 36.00     | 1.38         | 1.44  | 33.75 | 32.62          |                               | 2.75 | 32.06        | 34.50          | 0.75         | 48.00      | 105          | 390   |
| <b>34</b>            | 38.00     | 1.38         | 1.50  | 35.75 | 34.62          |                               | 2.88 | 34.06        | 36.50          | 0.75         | 52.00      | 110          | 430   |
| <b>36</b>            | 40.69     | 1.44         | 1.67  | 38.00 | 36.81          |                               | 3.38 | 36.06        | 39.06          | 0.88         | 40.00      | 145          | 518   |
| <b>38</b>            | 42.69     | 1.50         | 1.75  | 40.00 | 38.81          |                               | 3.50 | 38.06        | 41.06          | 0.88         | 40.00      | 160          | 595   |
| <b>40</b>            | 44.69     | 1.50         | 1.75  | 42.00 | 40.81          |                               | 3.62 | 40.06        | 43.06          | 0.88         | 44.00      | 170          | 760   |
| <b>42</b>            | 46.69     | 1.56         | 1.88  | 44.00 | 42.81          |                               | 3.75 | 42.06        | 45.06          | 0.88         | 48.00      | 185          | 895   |
| <b>44</b>            | 49.25     | 1.69         | 1.94  | 46.25 | 44.88          |                               | 4.12 | 44.06        | 47.38          | 1.00         | 36.00      | 230          | 1,065 |
| <b>46</b>            | 51.25     | 1.75         | 2.00  | 48.25 | 46.88          |                               | 4.25 | 46.06        | 49.38          | 1.00         | 40.00      | 245          | 1,185 |
| <b>48</b>            | 53.25     | 1.81         | 2.12  | 50.25 | 48.88          |                               | 4.38 | 48.06        | 51.38          | 1.00         | 44.00      | 270          | 1,315 |
| <b>50</b>            | 55.25     | 1.88         | 2.18  | 52.25 | 50.94          |                               | 4.56 | 50.06        | 53.38          | 1.00         | 44.00      | 290          | 1,505 |
| <b>52</b>            | 57.38     | 1.88         | 2.25  | 54.25 | 52.94          |                               | 4.75 | 52.06        | 55.50          | 1.00         | 48.00      | 310          | 1,665 |
| <b>54</b>            | 59.38     | 1.94         | 2.38  | 56.25 | 55.00          |                               | 4.94 | 54.06        | 57.50          | 1.00         | 48.00      | 340          | 1,840 |
| <b>56</b>            | 62.00     | 2.00         | 2.44  | 58.50 | 57.12          |                               | 5.31 | 56.06        | 59.88          | 1.12         | 40.00      | 400          | 2,110 |
| <b>58</b>            | 64.00     | 2.06         | 2.50  | 60.50 | 59.12          |                               | 5.44 | 58.06        | 61.88          | 1.12         | 44.00      | 430          | 2,300 |
| <b>60</b>            | 66.00     | 2.19         | 2.62  | 62.50 | 61.12          |                               | 5.69 | 60.06        | 63.88          | 1.12         | 44.00      | 475          | 2,500 |

Dimensions in inches. / Weight in pounds.

**Note:** Larger sizes as well as intermediate sizes can be furnished.

## ANSI B16.47 Series B Class 150 Flanges



Weld Neck



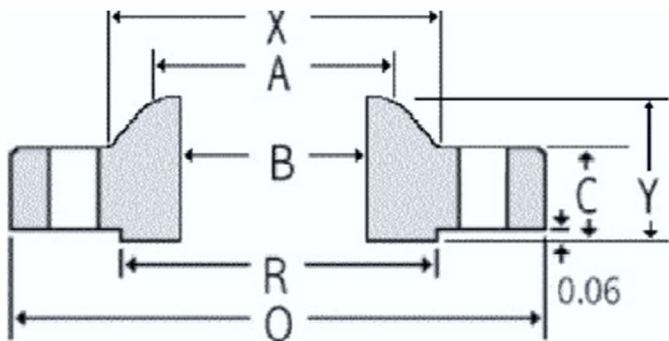
Blind

| Nom.<br>Pipe<br>Size | Thickness |              |       |       |                |                               |      |              | Drilling       |              |            | Weight       |       |
|----------------------|-----------|--------------|-------|-------|----------------|-------------------------------|------|--------------|----------------|--------------|------------|--------------|-------|
|                      | OD        | Weld<br>Neck | Blind | OD RF | Dia at<br>Base | Bore                          | LTH  | Dia<br>Bevel | Bolt<br>Circle | Dia<br>Holes | #<br>Holes | Weld<br>Neck | Blind |
|                      | O         | C            | C     | R     | X              | B                             | Y    | A            |                |              |            |              |       |
| <b>26</b>            | 30.94     | 1.62         | 1.75  | 28.00 | 26.94          | To be specified by purchaser. | 3.50 | 26.06        | 29.31          | 0.88         | 36.00      | 120          | 373   |
| <b>28</b>            | 32.94     | 1.75         | 1.88  | 30.00 | 28.94          |                               | 3.75 | 28.06        | 31.31          | 0.88         | 40.00      | 140          | 454   |
| <b>30</b>            | 34.94     | 1.75         | 2.00  | 32.00 | 31.00          |                               | 3.94 | 30.06        | 33.31          | 0.88         | 44.00      | 150          | 543   |
| <b>32</b>            | 37.06     | 1.81         | 2.12  | 34.00 | 33.06          |                               | 4.25 | 32.06        | 35.44          | 0.88         | 48.00      | 170          | 648   |
| <b>34</b>            | 39.56     | 1.94         | 2.25  | 36.25 | 35.12          |                               | 4.34 | 34.06        | 37.69          | 1.00         | 40.00      | 210          | 783   |
| <b>36</b>            | 41.62     | 2.06         | 2.31  | 38.25 | 37.19          |                               | 4.62 | 36.06        | 39.75          | 1.00         | 44.00      | 240          | 890   |
| <b>38</b>            | 44.25     | 2.12         | 2.50  | 40.25 | 39.25          |                               | 4.88 | 38.12        | 42.12          | 1.12         | 40.00      | 290          | 1,089 |
| <b>40</b>            | 46.25     | 2.19         | 2.62  | 42.50 | 41.31          |                               | 5.06 | 40.12        | 44.12          | 1.12         | 44.00      | 310          | 1,247 |
| <b>42</b>            | 48.25     | 2.31         | 2.69  | 44.50 | 43.38          |                               | 5.25 | 42.12        | 46.12          | 1.12         | 48.00      | 345          | 1,393 |
| <b>44</b>            | 50.25     | 2.38         | 2.81  | 46.50 | 45.38          |                               | 5.38 | 44.12        | 48.12          | 1.12         | 52.00      | 370          | 1,579 |
| <b>46</b>            | 52.81     | 2.44         | 2.94  | 48.62 | 47.44          |                               | 5.69 | 46.12        | 50.56          | 1.25         | 40.00      | 435          | 1,824 |
| <b>48</b>            | 54.81     | 2.56         | 3.06  | 50.75 | 49.50          |                               | 5.88 | 48.12        | 52.56          | 1.25         | 44.00      | 480          | 2,045 |
| <b>50</b>            | 56.81     | 2.69         | 3.18  | 52.75 | 51.50          |                               | 6.06 | 50.12        | 54.56          | 1.25         | 48.00      | 520          | 2,284 |
| <b>52</b>            | 58.81     | 2.75         | 3.31  | 54.75 | 53.56          |                               | 6.19 | 52.12        | 56.56          | 1.25         | 52.00      | 550          | 2,547 |
| <b>54</b>            | 61.00     | 2.81         | 3.44  | 56.75 | 55.62          |                               | 6.38 | 54.12        | 58.75          | 1.25         | 56.00      | 620          | 2,848 |
| <b>56</b>            | 63.00     | 2.88         | 3.56  | 58.75 | 57.69          |                               | 6.56 | 56.12        | 60.75          | 1.25         | 60.00      | 650          | 3,144 |
| <b>58</b>            | 65.94     | 2.94         | 3.68  | 60.75 | 59.69          |                               | 6.88 | 58.12        | 63.44          | 1.38         | 48.00      | 780          | 3,560 |
| <b>60</b>            | 67.94     | 3.00         | 3.81  | 63.00 | 61.81          |                               | 7.06 | 60.12        | 65.44          | 1.38         | 52.00      | 850          | 3,913 |

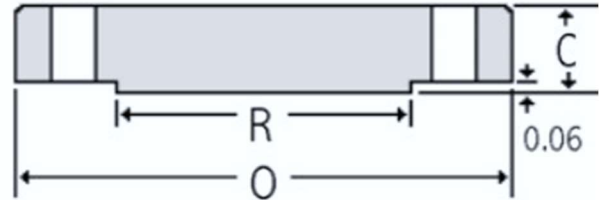
Dimensions in inches.

**Note:** Larger sizes as well as intermediate sizes can be furnished.

## ANSI B16.47 Series B Class 300 Flanges



Weld Neck



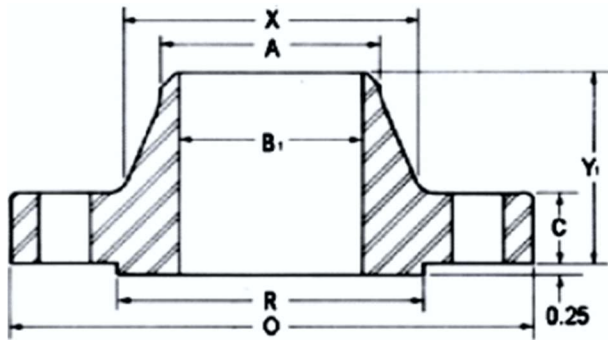
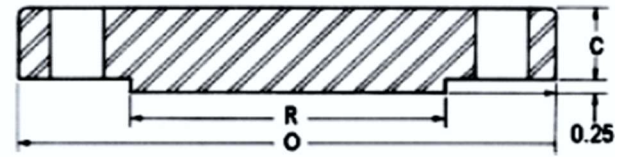
Blind

| Nom.<br>Pipe<br>Size | Thickness |              |       |       |                |                               |       |              | Drilling       |              |            | Weight       |       |
|----------------------|-----------|--------------|-------|-------|----------------|-------------------------------|-------|--------------|----------------|--------------|------------|--------------|-------|
|                      | OD        | Weld<br>Neck | Blind | OD RF | Dia at<br>Base | Bore                          | LTH   | Dia<br>Bevel | Bolt<br>Circle | Dia<br>Holes | #<br>Holes | Weld<br>Neck | Blind |
|                      | O         | C            | C     | R     | X              | B                             | Y     | A            |                |              |            |              |       |
| <b>26</b>            | 34.12     | 3.50         | 3.50  | 29.00 | 27.62          | To be specified by purchaser. | 5.69  | 26.19        | 31.62          | 1.38         | 32.00      | 400          | 907   |
| <b>28</b>            | 36.25     | 3.50         | 3.50  | 31.00 | 29.75          |                               | 5.88  | 28.19        | 33.75          | 1.38         | 36.00      | 450          | 1,023 |
| <b>30</b>            | 39.00     | 3.69         | 3.69  | 33.25 | 32.00          |                               | 6.22  | 30.25        | 36.25          | 1.50         | 36.00      | 550          | 1,249 |
| <b>32</b>            | 41.50     | 4.06         | 4.06  | 35.50 | 34.00          |                               | 6.62  | 32.25        | 38.50          | 1.62         | 32.00      | 685          | 1,556 |
| <b>34</b>            | 43.62     | 4.06         | 4.06  | 37.50 | 36.12          |                               | 6.81  | 34.25        | 40.62          | 1.62         | 36.00      | 750          | 1,719 |
| <b>36</b>            | 46.12     | 4.06         | 4.06  | 39.75 | 38.00          |                               | 7.12  | 36.25        | 42.88          | 1.75         | 32.00      | 840          | 1,921 |
| <b>38</b>            | 48.12     | 4.38         | 4.38  | 41.75 | 40.00          |                               | 7.56  | 38.25        | 44.88          | 1.75         | 36.00      | 915          | 2,257 |
| <b>40</b>            | 50.12     | 4.56         | 4.56  | 43.88 | 42.00          |                               | 7.81  | 40.25        | 46.88          | 1.75         | 40.00      | 990          | 2,549 |
| <b>42</b>            | 52.50     | 4.69         | 4.69  | 46.00 | 44.00          |                               | 8.06  | 42.31        | 49.00          | 1.88         | 36.00      | 1,135        | 2,876 |
| <b>44</b>            | 54.50     | 5.00         | 5.00  | 48.00 | 46.19          |                               | 8.44  | 44.31        | 51.00          | 1.88         | 40.00      | 1,235        | 3,304 |
| <b>46</b>            | 57.50     | 5.06         | 5.12  | 50.00 | 48.38          |                               | 8.75  | 46.31        | 53.75          | 2.00         | 36.00      | 1,470        | 3,766 |
| <b>48</b>            | 59.50     | 5.06         | 5.31  | 52.25 | 50.31          |                               | 8.81  | 48.31        | 55.75          | 2.00         | 40.00      | 1,575        | 4,183 |
| <b>50</b>            | 61.50     | 5.44         | 5.50  | 54.25 | 52.38          |                               | 9.25  | 50.31        | 57.75          | 2.00         | 44.00      | 1,710        | 4,629 |
| <b>52</b>            | 63.50     | 5.62         | 5.68  | 56.25 | 54.44          |                               | 9.56  | 52.31        | 59.75          | 2.00         | 48.00      | 1,840        | 5,096 |
| <b>54</b>            | 65.88     | 5.38         | 5.88  | 58.25 | 56.50          |                               | 9.44  | 54.31        | 62.12          | 2.00         | 48.00      | 1,980        | 5,678 |
| <b>56</b>            | 69.50     | 6.06         | 6.18  | 60.50 | 58.81          |                               | 10.56 | 56.31        | 65.00          | 2.38         | 36.00      | 2,595        | 6,642 |
| <b>58</b>            | 71.94     | 6.06         | 6.38  | 62.75 | 60.94          |                               | 10.81 | 58.31        | 67.44          | 2.38         | 40.00      | 2,770        | 7,347 |
| <b>60</b>            | 73.94     | 5.94         | 6.56  | 65.00 | 62.94          |                               | 10.69 | 60.31        | 69.44          | 2.38         | 40.00      | 2,870        | 7,980 |

Dimensions in inches.

**Note:** Larger sizes as well as intermediate sizes can be furnished.

## ANSI B16.47 Series B Class 400 Flanges

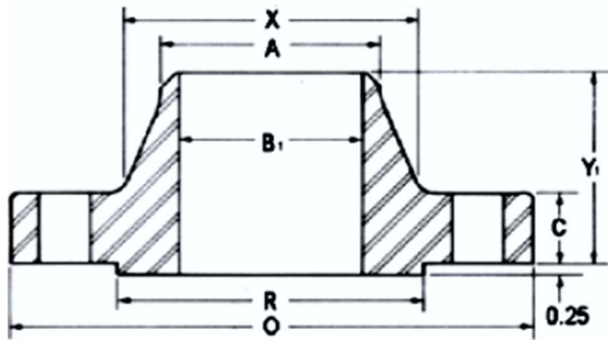
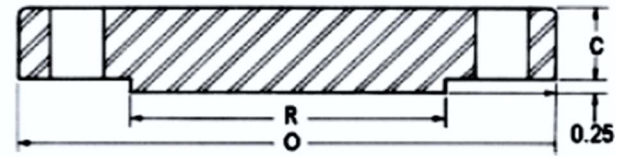

**Weld Neck**

**Blind**

| Nom.<br>Pipe<br>Size | Thickness |              |       |       |                |              |          | Drilling       |            |              | Weight       |       |
|----------------------|-----------|--------------|-------|-------|----------------|--------------|----------|----------------|------------|--------------|--------------|-------|
|                      | OD        | Weld<br>Neck | Blind | LTH   | Dia at<br>Base | Dia<br>Bevel | OD<br>RF | Bolt<br>Circle | #<br>Holes | Dia<br>Holes | Weld<br>Neck | Blind |
|                      | O         | C            | C     | Y     | X              | A            | R        |                |            |              |              |       |
| <b>26</b>            | 33.50     | 3.50         | 3.50  | 5.88  | 27.12          | 26.00        | 28.00    | 30.75          | 28.00      | 1.50         | 360          | 874   |
| <b>28</b>            | 36.00     | 3.75         | 3.75  | 6.25  | 29.12          | 28.00        | 30.00    | 33.00          | 24.00      | 1.62         | 450          | 1,081 |
| <b>30</b>            | 38.25     | 4.00         | 4.00  | 6.69  | 31.25          | 30.00        | 32.25    | 35.25          | 28.00      | 1.62         | 530          | 1,302 |
| <b>32</b>            | 40.75     | 4.25         | 4.25  | 7.06  | 33.25          | 32.00        | 34.38    | 37.50          | 28.00      | 1.75         | 635          | 1,570 |
| <b>34</b>            | 42.75     | 4.38         | 4.38  | 7.38  | 35.38          | 34.00        | 36.50    | 39.50          | 32.00      | 1.75         | 690          | 1,781 |
| <b>36</b>            | 45.50     | 4.69         | 4.69  | 7.88  | 37.50          | 36.00        | 38.62    | 42.00          | 28.00      | 1.88         | 855          | 2,160 |
| <b>38</b>            | 47.50     | 4.88         | 4.88  | 8.12  | 39.50          | 38.00        | 40.75    | 44.00          | 32.00      | 1.88         | 935          | 2,450 |
| <b>40</b>            | 50.00     | 5.12         | 5.12  | 8.50  | 41.50          | 40.00        | 43.00    | 46.25          | 32.00      | 2.00         | 1,090        | 2,848 |
| <b>42</b>            | 52.00     | 5.25         | 5.25  | 8.81  | 43.62          | 42.00        | 45.00    | 48.25          | 32.00      | 2.00         | 1,190        | 3,159 |
| <b>44</b>            | 54.50     | 5.50         | 5.50  | 9.18  | 45.62          | 44.00        | 47.25    | 50.50          | 32.00      | 2.12         | 1,375        | 3,635 |
| <b>46</b>            | 56.75     | 5.75         | 5.75  | 9.62  | 47.75          | 46.00        | 49.50    | 52.75          | 36.00      | 2.12         | 1,525        | 4,120 |
| <b>48</b>            | 59.50     | 6.00         | 6.00  | 10.12 | 49.88          | 48.00        | 51.50    | 55.25          | 28.00      | 2.38         | 1,790        | 4,726 |
| <b>50</b>            | 61.75     | 6.19         | 6.25  | 10.56 | 52.00          | 50.00        | 53.62    | 57.50          | 32.00      | 2.38         | 1,950        | 5,303 |
| <b>52</b>            | 63.75     | 6.38         | 6.44  | 10.88 | 54.00          | 52.00        | 55.62    | 59.50          | 32.00      | 2.38         | 2,125        | 5,823 |
| <b>54</b>            | 67.00     | 6.69         | 6.75  | 11.38 | 56.12          | 54.00        | 57.88    | 62.25          | 28.00      | 2.62         | 2,565        | 6,742 |
| <b>56</b>            | 69.00     | 6.88         | 6.94  | 11.75 | 58.25          | 56.00        | 60.12    | 64.25          | 32.00      | 2.62         | 2,710        | 7,352 |
| <b>58</b>            | 71.00     | 7.00         | 7.12  | 12.06 | 60.25          | 58.00        | 62.12    | 66.25          | 32.00      | 2.62         | 3,230        | 7,986 |
| <b>60</b>            | 74.25     | 7.31         | 7.44  | 12.56 | 62.38          | 60.00        | 64.38    | 69.00          | 32.00      | 2.88         | 3,820        | 9,126 |

Dimensions in inches.

**Note:** Larger sizes as well as intermediate sizes can be furnished.

## ANSI B16.47 Series B Class 600 Flanges

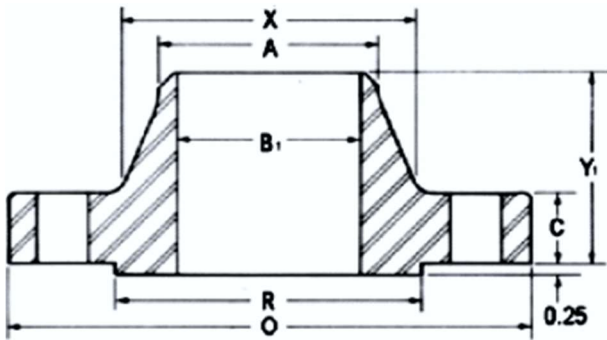
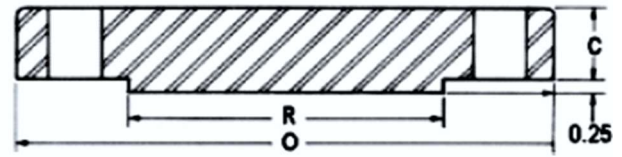

**Weld Neck**

**Blind**

| Nom.<br>Pipe<br>Size | Thickness |              |       |       |                |              |          | Drilling       |            |              | Weight       |        |
|----------------------|-----------|--------------|-------|-------|----------------|--------------|----------|----------------|------------|--------------|--------------|--------|
|                      | OD        | Weld<br>Neck | Blind | LTH   | Dia at<br>Base | Dia<br>Bevel | OD<br>RF | Bolt<br>Circle | #<br>Holes | Dia<br>Holes | Weld<br>Neck | Blind  |
|                      | O         | C            | C     | Y     | X              | A            | R        |                |            |              |              |        |
| 26                   | 35.00     | 4.38         | 4.38  | 7.12  | 27.50          | 26.00        | 28.62    | 31.75          | 28.00      | 1.75         | 550          | 1,194  |
| 28                   | 37.50     | 4.56         | 4.56  | 7.50  | 29.62          | 28.00        | 30.88    | 34.00          | 28.00      | 1.88         | 650          | 1,427  |
| 30                   | 40.25     | 4.94         | 5.00  | 8.06  | 31.75          | 30.00        | 33.12    | 36.50          | 28.00      | 2.00         | 810          | 1,802  |
| 32                   | 42.75     | 5.12         | 5.31  | 8.50  | 33.88          | 32.00        | 35.25    | 38.75          | 28.00      | 2.12         | 950          | 2,159  |
| 34                   | 45.75     | 5.56         | 5.68  | 9.19  | 36.00          | 34.00        | 37.50    | 41.50          | 24.00      | 2.38         | 1,205        | 2,645  |
| 36                   | 47.75     | 5.75         | 5.94  | 9.56  | 38.12          | 36.00        | 39.75    | 43.50          | 28.00      | 2.38         | 1,340        | 3,013  |
| 38                   | 50.00     | 6.00         | 6.12  | 10.00 | 40.25          | 38.00        | 41.50    | 45.75          | 28.00      | 2.38         | 1,470        | 3,404  |
| 40                   | 52.00     | 6.25         | 6.38  | 10.38 | 42.25          | 40.00        | 43.75    | 47.75          | 32.00      | 2.38         | 1,630        | 3,838  |
| 42                   | 55.25     | 6.62         | 6.75  | 11.00 | 44.38          | 42.00        | 46.00    | 50.50          | 28.00      | 2.62         | 2,030        | 4,585  |
| 44                   | 57.25     | 6.81         | 7.00  | 11.38 | 46.50          | 44.00        | 48.25    | 52.50          | 32.00      | 2.62         | 2,160        | 5,105  |
| 46                   | 59.50     | 7.06         | 7.31  | 11.81 | 48.62          | 46.00        | 50.25    | 54.75          | 32.00      | 2.62         | 2,410        | 5,758  |
| 48                   | 62.75     | 7.44         | 7.69  | 12.44 | 50.75          | 48.00        | 52.50    | 57.50          | 32.00      | 2.88         | 2,855        | 6,737  |
| 50                   | 65.75     | 7.75         | 8.00  | 12.94 | 52.88          | 50.00        | 54.50    | 60.00          | 28.00      | 3.12         | 3,330        | 7,695  |
| 52                   | 67.75     | 8.00         | 8.25  | 13.25 | 54.88          | 52.00        | 56.50    | 62.00          | 32.00      | 3.12         | 3,560        | 8,426  |
| 54                   | 70.00     | 8.25         | 8.56  | 13.75 | 57.00          | 54.00        | 58.75    | 64.25          | 32.00      | 3.12         | 3,920        | 9,333  |
| 56                   | 73.00     | 8.56         | 8.88  | 14.25 | 59.12          | 56.00        | 60.75    | 66.75          | 32.00      | 3.38         | 4,280        | 10,529 |
| 58                   | 75.00     | 8.75         | 9.12  | 14.56 | 61.12          | 58.00        | 63.00    | 68.75          | 32.00      | 3.38         | 4,640        | 11,414 |
| 60                   | 78.50     | 9.19         | 9.56  | 15.31 | 63.38          | 60.00        | 65.25    | 71.75          | 28.00      | 3.62         | 5,000        | 13,108 |

Dimensions in inches.

**Note:** Larger sizes as well as intermediate sizes can be furnished.

## ANSI B16.47 Series B Class 900 Flanges


**Weld Neck**

**Blind**

| NPS       | Thickness |           |       |       |             |           |       | Drilling    |         |           | Weight    |        |
|-----------|-----------|-----------|-------|-------|-------------|-----------|-------|-------------|---------|-----------|-----------|--------|
|           | OD        | Weld Neck | Blind | LTH   | Dia at Base | Dia Bevel | OD RF | Bolt Circle | # Holes | Dia Holes | Weld Neck | Blind  |
|           | O         | C         | C     | Y     | X           | A         | R     |             |         |           |           |        |
| <b>26</b> | 40.25     | 5.31      | 6.06  | 10.19 | 29.25       | 26.00     | 30.00 | 35.50       | 20.00   | 2.62      | 1,050     | 2,184  |
| <b>28</b> | 43.50     | 5.81      | 6.56  | 10.88 | 31.38       | 28.00     | 32.25 | 38.25       | 20.00   | 2.88      | 1,520     | 2,762  |
| <b>30</b> | 46.50     | 6.12      | 6.93  | 11.38 | 33.50       | 30.00     | 34.50 | 40.75       | 20.00   | 3.12      | 1,820     | 3,334  |
| <b>32</b> | 48.75     | 6.31      | 7.31  | 11.94 | 35.75       | 32.00     | 36.50 | 43.00       | 20.00   | 3.12      | 2,065     | 3,865  |
| <b>34</b> | 51.75     | 6.75      | 7.68  | 12.56 | 37.88       | 34.00     | 39.00 | 45.50       | 20.00   | 3.38      | 2,450     | 4,576  |
| <b>36</b> | 53.00     | 6.81      | 7.94  | 12.81 | 40.00       | 36.00     | 40.50 | 47.25       | 24.00   | 3.12      | 2,520     | 4,963  |
| <b>38</b> | 57.50     | 7.50      | 8.50  | 13.88 | 42.25       | 38.00     | 43.25 | 50.75       | 20.00   | 3.62      | 3,385     | 6,253  |
| <b>40</b> | 59.50     | 7.75      | 8.81  | 14.31 | 44.38       | 40.00     | 45.75 | 52.75       | 24.00   | 3.62      | 3,620     | 6,940  |
| <b>42</b> | 61.50     | 8.12      | 9.12  | 14.62 | 46.31       | 42.00     | 47.75 | 54.75       | 24.00   | 3.62      | 3,960     | 7,675  |
| <b>44</b> | 64.88     | 8.44      | 9.56  | 15.38 | 48.62       | 44.00     | 50.00 | 57.62       | 24.00   | 3.88      | 4,300     | 8,954  |
| <b>46</b> | 68.25     | 8.88      | 10.06 | 16.18 | 50.88       | 46.00     | 52.50 | 60.50       | 24.00   | 4.12      | 4,640     | 10,426 |
| <b>48</b> | 70.25     | 9.19      | 10.38 | 16.50 | 52.88       | 48.00     | 54.50 | 62.50       | 24.00   | 4.12      | 4,980     | 11,398 |

Dimensions in inches.

**Note:** Larger sizes as well as intermediate sizes can be furnished.