

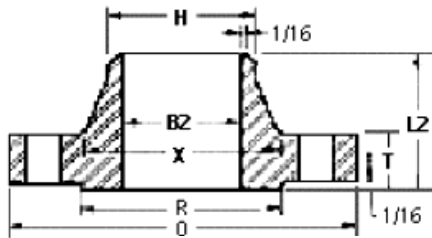
ANSI FLANGES

WELLGROW INDUSTRIES CORP.

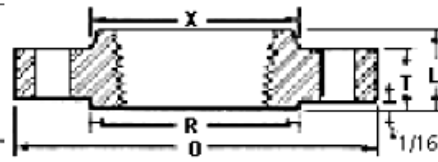


- ▲ **Weld Neck Flange**
- ▲ **Threaded Flange**
- ▲ **Slip On Flange**
- ▲ **Lap Joint Flange**
- ▲ **Socket Weld Flange**
- ▲ **Blind Flange**

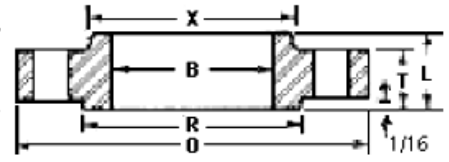
ANSI B16.5 Class 150 Flanges



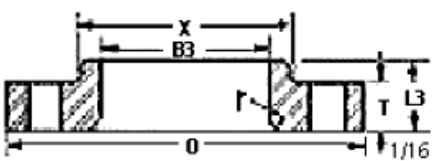
Weld Neck Flange



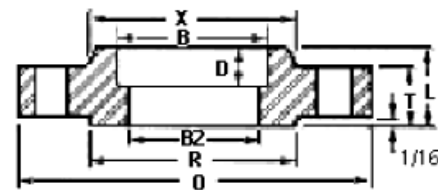
Threaded Flange



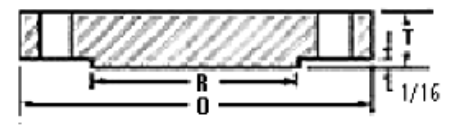
Slip On Flange



Lap Joint Flange



Socket Weld Flange

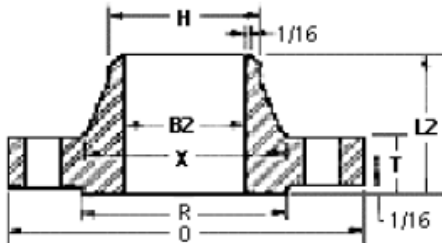


Blind Flange

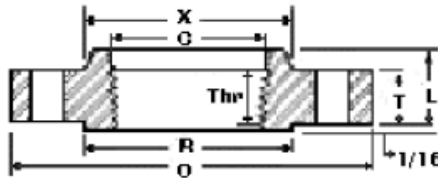
| Nom. Pipe Size | O | T | R | X | No./Dia. of Holes | Bolt Circle Dia. | L2 | H | B2 | L | B | r | L3 | B3 | D |
|----------------|-------|------|-------|-------|-------------------|------------------|------|-------|-------|------|-------|------|------|-------|------|
| 1/2 | 3.50 | 0.44 | 1.38 | 1.19 | 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.

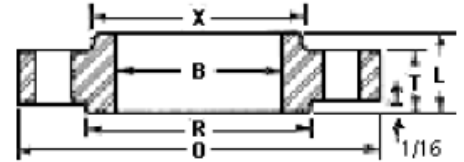
ANSI B16.5 Class 300 Flanges



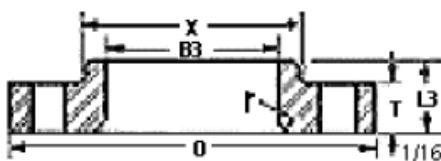
Weld Neck Flange



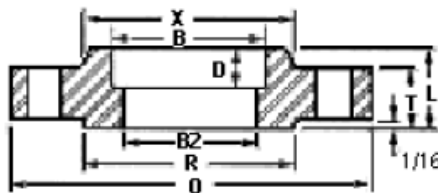
Threaded Flange



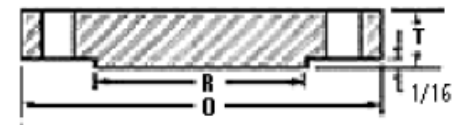
Slip On Flange



Lap Joint Flange



Socket Weld Flange

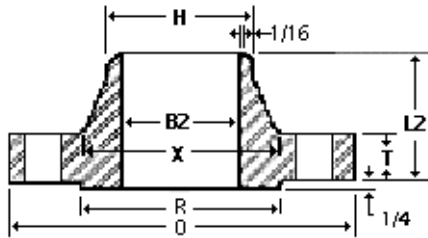


Blind Flange

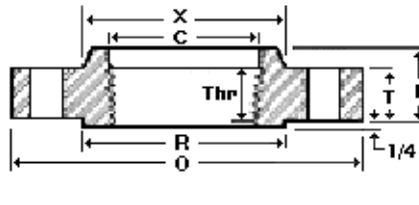
| Nom. Pipe Size | O | T | R | X | No. & Dia. of Holes | Bolt Circle Dia. | L2 | H | B2 | L | B | r | L3 | B3 | D | C | Thr |
|----------------|-------|------|-------|-------|---------------------|------------------|------|-------|-------|------|-------|------|------|-------|------|-------|------|
| 1/2 | 3.75 | 0.56 | 1.38 | 1.5 | 4-0.62 | 2.62 | 2.06 | 0.84 | 0.62 | 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 | 0.82 | 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 | 1.05 | 1.06 | 1.36 | 0.12 | 1.06 | 1.38 | 0.50 | 1.41 | 0.69 |
| 1-1/4 | 5.25 | 0.75 | 2.50 | 2.50 | 4-0.75 | 3.88 | 2.56 | 1.66 | 1.38 | 1.06 | 1.70 | 0.19 | 1.06 | 1.72 | 0.56 | 1.75 | 0.81 |
| 1-1/2 | 6.12 | 0.81 | 2.88 | 2.75 | 4-0.88 | 4.50 | 2.69 | 1.90 | 1.61 | 1.19 | 1.95 | 0.25 | 1.19 | 1.97 | 0.62 | 1.99 | 0.88 |
| 2 | 6.50 | 0.88 | 3.62 | 3.31 | 8-0.75 | 5.00 | 2.75 | 2.38 | 2.07 | 1.31 | 2.44 | 0.31 | 1.31 | 2.46 | 0.69 | 2.50 | 1.12 |
| 2-1/2 | 7.50 | 1.00 | 4.12 | 3.94 | 8-0.88 | 5.88 | 3.00 | 2.88 | 2.47 | 1.50 | 2.94 | 0.31 | 1.50 | 2.97 | 0.75 | 3.00 | 1.25 |
| 3 | 8.25 | 1.12 | 5.00 | 4.62 | 8-0.88 | 6.62 | 3.12 | 3.50 | 3.07 | 1.69 | 3.57 | 0.38 | 1.69 | 3.60 | 0.81 | 3.63 | 1.25 |
| 3-1/2 | 9.00 | 1.19 | 5.50 | 5.25 | 8-0.88 | 7.25 | 3.19 | 4.00 | 3.55 | 1.75 | 4.07 | 0.38 | 1.75 | 4.10 | | 4.13 | 1.44 |
| 4 | 10.00 | 1.25 | 6.19 | 5.75 | 8-0.88 | 7.88 | 3.38 | 4.50 | 4.03 | 1.88 | 4.57 | 0.44 | 1.88 | 4.60 | | 4.63 | 1.44 |
| 5 | 11.00 | 1.38 | 7.31 | 7.00 | 8-0.88 | 9.25 | 3.88 | 5.56 | 5.05 | 2.00 | 5.66 | 0.44 | 2.00 | 5.69 | | 5.69 | 1.69 |
| 6 | 12.50 | 1.44 | 8.50 | 8.12 | 12-0.88 | 10.62 | 3.88 | 6.63 | 6.07 | 2.06 | 6.72 | 0.50 | 2.06 | 6.75 | | 6.75 | 1.81 |
| 8 | 15.00 | 1.62 | 10.62 | 10.25 | 12-1.00 | 13.00 | 4.38 | 8.63 | 7.98 | 2.44 | 8.72 | 0.50 | 2.44 | 8.75 | | 8.75 | 2.00 |
| 10 | 17.50 | 1.88 | 12.75 | 12.62 | 16-1.12 | 15.25 | 4.62 | 10.75 | 10.02 | 2.62 | 10.88 | 0.50 | 3.75 | 10.92 | | 10.88 | 2.19 |
| 12 | 20.50 | 2.00 | 15.00 | 14.75 | 16-1.25 | 17.75 | 5.12 | 12.75 | 12.00 | 2.88 | 12.88 | 0.50 | 4.00 | 12.92 | | 12.94 | 2.38 |
| 14 | 23.00 | 2.12 | 16.25 | 16.75 | 20-1.25 | 20.25 | 5.62 | 14.00 | 13.25 | 3.00 | 14.14 | 0.50 | 4.38 | 14.18 | | 14.19 | 2.50 |
| 16 | 25.50 | 2.25 | 18.50 | 19.00 | 20-1.38 | 22.50 | 5.75 | 16.00 | 15.25 | 3.25 | 16.16 | 0.50 | 4.75 | 16.19 | | 16.19 | 2.69 |
| 18 | 28.00 | 2.38 | 21.00 | 21.00 | 24-1.38 | 24.75 | 6.25 | 18.00 | 17.25 | 3.50 | 18.18 | 0.50 | 5.12 | 18.20 | | 18.19 | 2.75 |
| 20 | 30.50 | 2.50 | 23.00 | 23.12 | 24-1.38 | 27.00 | 6.38 | 20.00 | 19.25 | 3.75 | 20.20 | 0.50 | 5.50 | 20.25 | | 20.19 | 2.88 |
| 22 | 33.00 | 2.63 | 25.25 | 25.25 | 24-1.63 | 29.25 | 6.50 | 22.00 | 21.25 | 4.00 | 22.22 | 0.50 | 5.75 | 22.25 | | 22.19 | 3.13 |
| 24 | 36.00 | 2.75 | 27.25 | 27.62 | 24-1.62 | 32.00 | 6.62 | 24.00 | 23.25 | 4.19 | 24.25 | 0.50 | 6.00 | 24.25 | | 24.19 | 3.25 |

Dimensions in inches.

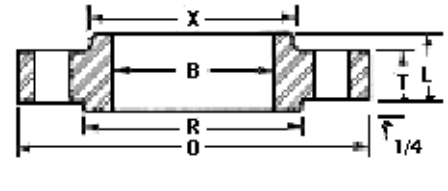
ANSI B16.5 Class 400 Flanges



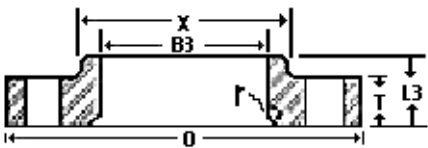
Weld Neck Flange



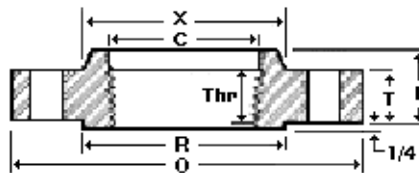
Threaded Flange



Slip On Flange



Lap Joint Flange



Socket Weld Flange



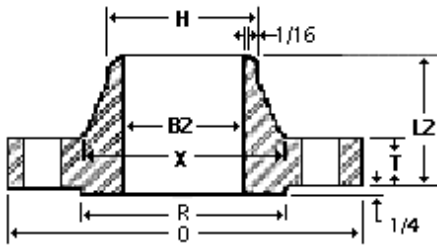
Blind Flange

| Nom. Pipe Size | 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 | 4-0.75 | 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 | 4.13 | 4.13 | 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 | | 4.63 | 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 | 5.69 | 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 | | 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 | 8.75 | 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 | | 10.88 | 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 | 12.94 | 12.94 | 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 | | 14.19 | 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 | 16.19 | 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 | | 18.19 | 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 | 20.19 | 20.19 | 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 | 24.19 | 24.19 | 3.25 |
| | | | | | | | | | | | | | | | | | |

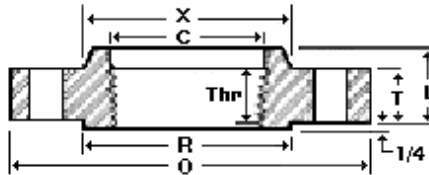
Dimensions in inches.

- 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.

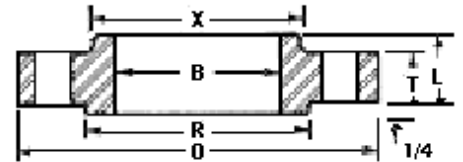
ANSI B16.5 Class 600 Flanges



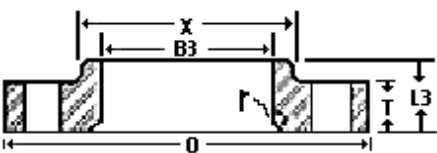
Weld Neck Flange



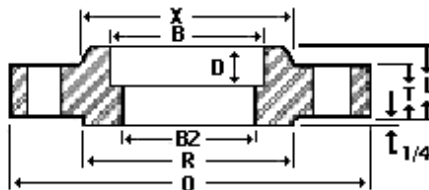
Threaded Flange



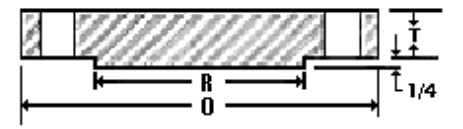
Slip On Flange



Lap Joint Flange



Socket Weld Flange



Blind Flange

| Nom. Pipe Size | 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 | 4.13 | 4.13 | 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 | | 4.63 | 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 | 5.69 | 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 | | 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 | 8.75 | 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 | | 10.88 | 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 | 12.94 | 12.94 | 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 | | 14.19 | 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 | 18.19 | 18.19 | 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 | | 18.10 | 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 | 20.19 | 20.19 | 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 | 24.19 | 24.19 | 3.62 |

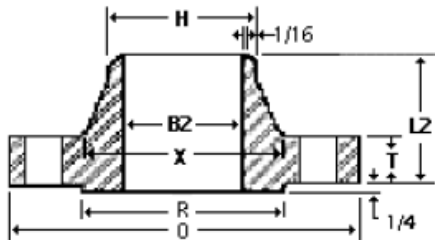
Dimensions in inches.

1. Sizes NPS 1/2 through 3-1/2 are same as Class 400 flanges.

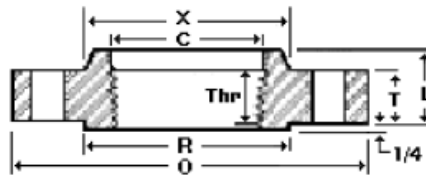
2. 1/4 in. raised face not included in dimensions T, L and L2.

3. Bolt hole diameter 1/8 in. larger than bolt diameter.

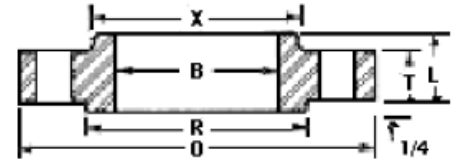
ANSI B16.5 Class 900 Flanges



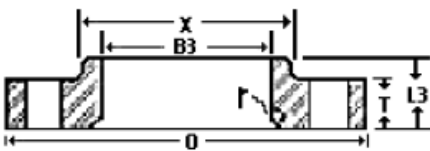
Weld Neck Flange



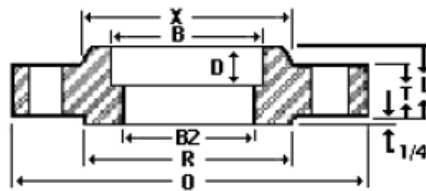
Threaded Flange



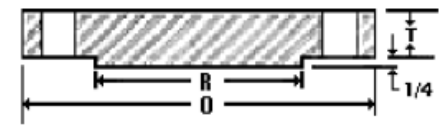
Slip On Flange



Lap Joint Flange



Socket Weld Flange



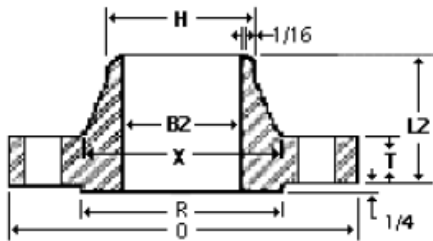
Blind Flange

| Nom. Pipe Size | O | T | R | X | No. & Dia. of Holes | Bolt Circle 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 | To be specified by purchaser. | 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 |

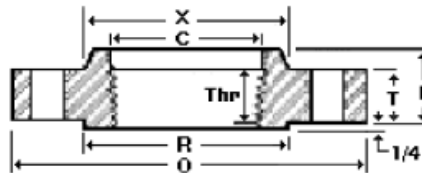
Dimensions in inches.

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

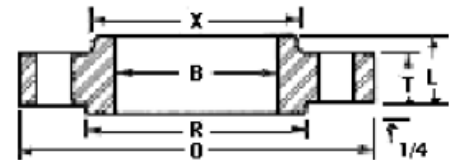
ANSI B16.5 Class 1500 Flanges



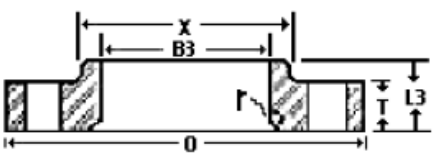
Weld Neck Flange



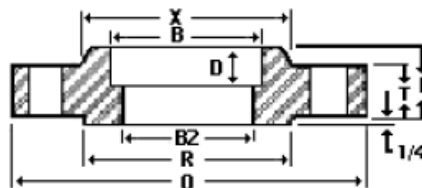
Threaded Flange



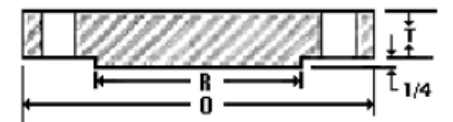
Slip On Flange



Lap Joint Flange



Socket Weld Flange



Blind Flange

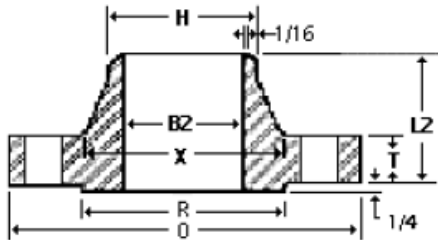
| Nom. Pipe Size | O | T | R | X | No. & Dia. of Holes | Bolt Circle Dia. | L2 | H | B2 | L | B | r | L3 | D | B3 | THr |
|----------------|-------|------|-------|-------|---------------------|------------------|-------|-------|-------------------------------|------|-------|------|-------|------|-------|------|
| 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.

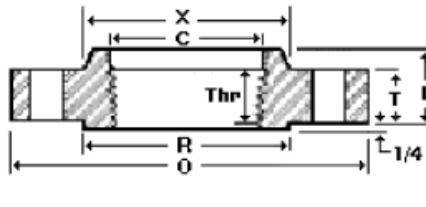
1. 1/4 in. raised face not included in dimensions T, L and L2.

2. Bolt hole diameter 1/8 in. larger than bolt diameter.

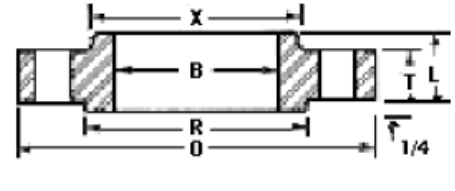
ANSI B16.5 Class 2500 Flanges



Weld Neck Flange



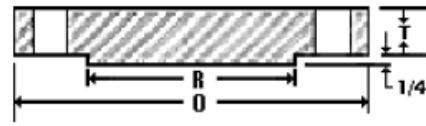
Threaded Flange



Slip On Flange



Lap Joint Flange



Blind Flange

| 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. 1/4 in. raised face not included in dimensions T, L and L2.

2. Bolt hole diameter 1/8 in. larger than bolt diameter.

Dimensional Tolerance - ANSI B16.5

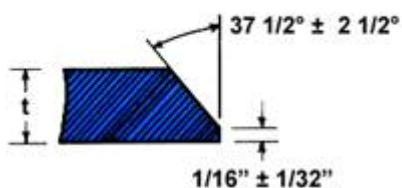
| Threaded, Socket-Welding, Slip-On, Lap Joint and Blind | | | | |
|--|---|--------------|-------------------------------|----------------|
| Outside Diameter * | 6" and below | | ±1.5mm | |
| | 8" ~ 24" | | ±2.0mm | |
| | over 24" | | ±3.0mm | |
| Inside Diameter | Threaded | | Within limits on boring gauge | |
| | Socket-Welding, Slip-On and Lap-Joint | | 2-1/2" and below | +0.5mm -0mm |
| | | | 3" ~ 10" | +0.8mm -0mm |
| | | | 12" and above | +1.6mm -0mm |
| Outside Diameter of Hub * | 1/2" ~ 24" | | +3.0mm -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 -0mm | |
| | 12" ~ 18" | ±1.6mm | |
| | 20" and above | +3.2mm -1.6mm | |
| Diameter of Hub at Base * | 1/2" ~ 24" | +3.0mm -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 -0.8mm | |
| | 6" and above | +4.0mm -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

For Wall Thickness "t" 3/16" to 3/4" including



For Wall Thickness "t" greater than 3/4"

