

## SECTION 7

## FLANGES, FLANGE UNIONS, COMPANION FLANGES, FLANGED FITTINGS



WARD flange components are made with high quality iron and are designed to handle the tough service that flange components normally experience. Precision machining and thread chamfering allow WARD flange components to be easily installed. Most importantly, quality is built into the design, material and manufacturing of each of WARD's flange components.

Cast Iron flanges may have either a black or galvanized finish.

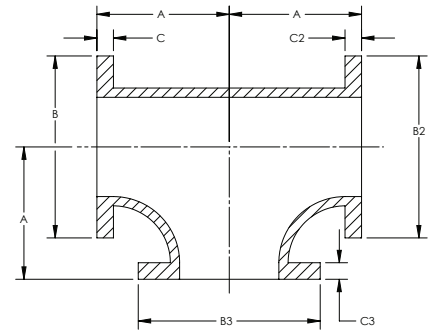
|       | FLANGES        |                           | HUB               | BLIND FLANGES                   |              | BOLT HOLES     |                     | BOLTING            |                 |               |                 |
|-------|----------------|---------------------------|-------------------|---------------------------------|--------------|----------------|---------------------|--------------------|-----------------|---------------|-----------------|
| NPS   | Dia. of Flange | Thickness of Flange (min) | Dia. of Hub (min) | Length of Hub and Threads (min) | Dia. of Port | Wall Thickness | Dia. of Bolt Circle | Dia. of Bolt Holes | Number of Bolts | Dia. of Bolts | Length of Bolts |
| 1     | 4.25           | 0.44                      | 1.94              | 0.69                            | 1.00         | 0.38           | 3.12                | 0.62               | 4               | 0.50          | 2.00            |
| 1 1/4 | 4.62           | 0.50                      | 2.31              | 0.81                            | 1.25         | 0.44           | 3.50                | 0.62               | 4               | 0.50          | 2.00            |
| 1 1/2 | 5.00           | 0.56                      | 2.56              | 0.88                            | 1.50         | 0.50           | 3.88                | 0.62               | 4               | 0.50          | 2.00            |
| 2     | 6.00           | 0.62                      | 3.06              | 1.00                            | 2.00         | 0.56           | 4.75                | 0.75               | 4               | 0.62          | 2.50            |
| 2 1/2 | 7.00           | 0.69                      | 3.56              | 1.12                            | 2.50         | 0.63           | 5.50                | 0.75               | 4               | 0.62          | 2.50            |
| 3     | 7.50           | 0.75                      | 4.25              | 1.19                            | 3.00         | 0.69           | 6.00                | 0.75               | 4               | 0.62          | 2.50            |
| 3 1/2 | 8.50           | 0.81                      | 4.81              | 1.25                            | 3.50         | 0.75           | 7.00                | 0.75               | 8               | 0.62          | 3.00            |
| 4     | 9.00           | 0.94                      | 5.31              | 1.31                            | 4.00         | 0.88           | 7.50                | 0.75               | 8               | 0.62          | 3.00            |
| 5     | 10.00          | 0.94                      | 6.44              | 1.44                            | 5.00         | 0.88           | 8.50                | 0.88               | 8               | 0.75          | 3.00            |
| 6     | 11.00          | 1.00                      | 7.56              | 1.56                            | 6.00         | 0.94           | 9.50                | 0.88               | 8               | 0.75          | 3.50            |
| 8     | 13.50          | 1.12                      | 9.96              | 1.75                            | 8.00         | 1.06           | 11.75               | 0.88               | 8               | 0.75          | 3.50            |
| 10    | 16.00          | 1.19                      | 11.94             | 1.94                            | 10.00        | 1.12           | 14.25               | 1.00               | 12              | 0.88          | 4.00            |
| 12    | 19.00          | 1.25                      | 14.06             | 2.19                            | 12.00        | 0.81           | 17.00               | 1.00               | 12              | 0.88          | 4.00            |

**Material:** ASTM A126  
**Dimensions:** ANSI / ASME B16.1  
 ANSI / ASME B1.20.1  
**Pressure Ratings:** ANSI/ASME B16.1  
**Coatings:** ASTM A153  
 ASTM B633  
**Additional Specifications:** UL, ULC AND FM, where applicable

Metalfit flanged fitting made in North America.

# CAST IRON FLANGED REDUCING TEE CLASS 125

| NPS             | Center to Face A | Outside Flange Dia. B | Outside Flange Dia. B2 | Outside Flange Dia. B3 | Thickness of Flange C (min) | Thickness of Flange C2 (min) | Thickness of Flange C3 (min) |
|-----------------|------------------|-----------------------|------------------------|------------------------|-----------------------------|------------------------------|------------------------------|
| 3 x 3 x 4       | 5.500            | 7.500                 | 7.500                  | 9.000                  | 0.750                       | 0.750                        | 0.940                        |
| 3 x 3 x 2 1/2   | 5.500            | 7.500                 | 7.500                  | 7.000                  | 0.750                       | 0.750                        | 0.690                        |
| 3 x 3 x 2       | 5.500            | 7.500                 | 7.500                  | 6.000                  | 0.750                       | 0.750                        | 0.620                        |
| 4 x 3 x 4       | 6.500            | 9.000                 | 7.500                  | 9.000                  | 0.940                       | 0.750                        | 0.940                        |
| 4 x 3 x 3       | 6.500            | 9.000                 | 7.500                  | 7.500                  | 0.940                       | 0.750                        | 0.750                        |
| 4 x 2 x 4       | 6.500            | 9.000                 | 6.000                  | 9.000                  | 0.940                       | 0.620                        | 0.940                        |
| 4 x 4 x 6       | 8.000            | 9.000                 | 9.000                  | 11.000                 | 0.940                       | 0.940                        | 1.000                        |
| 4 x 4 x 3       | 6.500            | 9.000                 | 9.000                  | 7.000                  | 0.940                       | 0.940                        | 0.750                        |
| 4 x 4 x 2 1/2   | 6.500            | 9.000                 | 9.000                  | 7.000                  | 0.940                       | 0.940                        | 0.690                        |
| 4 x 4 x 2       | 6.500            | 9.000                 | 9.000                  | 6.000                  | 0.940                       | 0.940                        | 0.620                        |
| 6 x 4 x 6       | 8.000            | 11.000                | 9.000                  | 11.000                 | 1.000                       | 0.940                        | 1.000                        |
| 6 x 4 x 4       | 8.000            | 11.000                | 9.000                  | 9.000                  | 1.000                       | 0.940                        | 0.940                        |
| 6 x 4 x 3       | 8.000            | 11.000                | 9.000                  | 7.000                  | 1.000                       | 0.940                        | 0.750                        |
| 6 X 3 X 6       | 8.000            | 11.000                | 7.000                  | 11.000                 | 1.000                       | 0.750                        | 1.000                        |
| 6 x 6 x 8       | 9.000            | 11.000                | 11.000                 | 13.500                 | 1.000                       | 1.000                        | 1.120                        |
| 6 x 6 x 4       | 8.000            | 11.000                | 11.000                 | 9.000                  | 1.000                       | 1.000                        | 0.940                        |
| 6 x 6 x 3       | 8.000            | 11.000                | 11.000                 | 7.500                  | 1.000                       | 1.000                        | 0.750                        |
| 6 x 6 x 2 1/2   | 8.000            | 11.000                | 11.000                 | 7.000                  | 1.000                       | 1.000                        | 0.690                        |
| 6 x 6 x 2       | 8.000            | 11.000                | 11.000                 | 6.000                  | 1.000                       | 1.000                        | 0.620                        |
| 8 x 6 x 8       | 9.000            | 13.500                | 11.000                 | 13.500                 | 1.120                       | 1.000                        | 1.120                        |
| 8 x 6 x 6       | 9.000            | 13.500                | 11.000                 | 11.000                 | 1.120                       | 1.000                        | 1.000                        |
| 8 x 6 x 4       | 9.000            | 13.500                | 11.000                 | 9.000                  | 1.120                       | 1.000                        | 0.940                        |
| 8 x 4 x 8       | 9.000            | 13.500                | 9.000                  | 13.500                 | 1.120                       | 0.940                        | 1.120                        |
| 8 x 8 x 10      | 11.000           | 13.500                | 13.500                 | 16.000                 | 1.120                       | 1.120                        | 1.190                        |
| 8 x 8 x 6       | 9.000            | 13.500                | 13.500                 | 11.000                 | 1.120                       | 1.120                        | 1.000                        |
| 8 x 8 x 4       | 9.000            | 13.500                | 13.500                 | 9.000                  | 1.120                       | 1.120                        | 0.940                        |
| 8 x 8 x 3       | 9.000            | 13.500                | 13.500                 | 7.500                  | 1.120                       | 1.120                        | 0.750                        |
| 10 x 8 x 10     | 11.000           | 16.000                | 13.500                 | 16.000                 | 1.190                       | 1.120                        | 1.190                        |
| 10 x 8 x 8      | 11.000           | 16.000                | 13.500                 | 13.500                 | 1.190                       | 1.120                        | 1.120                        |
| 10 x 8 x 6      | 11.000           | 16.000                | 13.500                 | 11.000                 | 1.190                       | 1.120                        | 1.000                        |
| 10 x 6 x 10     | 11.000           | 16.000                | 11.000                 | 19.000                 | 1.190                       | 1.000                        | 1.190                        |
| 10 x 10 x 12    | 12.000           | 16.000                | 16.000                 | 19.000                 | 1.190                       | 1.190                        | 1.250                        |
| 10 x 10 x 8     | 11.000           | 16.000                | 16.000                 | 13.500                 | 1.190                       | 1.190                        | 1.120                        |
| 10 x 10 x 6     | 11.000           | 16.000                | 16.000                 | 11.000                 | 1.190                       | 1.190                        | 1.000                        |
| 10 x 10 x 4     | 11.000           | 16.000                | 16.000                 | 9.000                  | 1.190                       | 1.190                        | 0.940                        |
| 10 x 10 x 3     | 11.000           | 16.000                | 16.000                 | 7.000                  | 1.190                       | 1.190                        | 0.750                        |
| 10 x 10 x 2 1/2 | 11.000           | 16.000                | 16.000                 | 7.000                  | 1.190                       | 1.190                        | 0.690                        |
| 12 x 10 x 12    | 12.000           | 19.000                | 16.000                 | 19.000                 | 1.250                       | 1.190                        | 1.250                        |
| 12 x 10 x 10    | 12.000           | 19.000                | 16.000                 | 16.000                 | 1.250                       | 1.190                        | 1.190                        |
| 12 x 12 x 10    | 12.000           | 19.000                | 19.000                 | 16.000                 | 1.250                       | 1.250                        | 1.190                        |
| 12 x 12 x 8     | 12.000           | 19.000                | 19.000                 | 13.500                 | 1.250                       | 1.250                        | 1.120                        |
| 12 x 12 x 6     | 12.000           | 19.000                | 19.000                 | 11.000                 | 1.250                       | 1.250                        | 1.000                        |
| 12 x 12 x 4     | 12.000           | 19.000                | 19.000                 | 9.000                  | 1.250                       | 1.250                        | 0.940                        |
| 12 x 12 x 3     | 12.000           | 19.000                | 19.000                 | 7.000                  | 1.250                       | 1.250                        | 0.750                        |



Metalfit flanged reducing tee made in North America.