



tactlok

PIPE FITTINGS

Model No. TT-701-P
PLUG



01

Model No. TT-702
BUSHING



01

Model No. TT-703
NIPPLE



02

Model No. TT-704
CAP



02

Model No. TT-705
COUPLING



03

Model No. TT-706
ADAPTOR



03

Model No. TT-707
MALE ELBOW



04

Model No. TT-708
FEMALE ELBOW



04

Model No. TT-709
STREET ELBOW



05

Model No. TT-710
MALE TEE



05

Model No. TT-711
FEMALE CROSS



06

Model No. TT-712
FEMALE TEE



06

Model No. TT-713
BRANCH TEE

07

Model No. TT-714
ROUND COUPLING

07

Model No. TT-715
90° ELBOW

08



Model No. TT-716
TEE

09

Model No. TT-717
FULL COUPLING

10

Model No. TT-718
NIPPLE

11



Model No. TT-719
45° ELBOW

12

Model No. TT-720
CROSS

13

Model No. TT-721
THREADED END UNION

14



Model No. TT-722
SOCKET WELD UNION

15



Model No. TT-725
SWAGED NIPPLE

18



Model No. TT-727
**SOCKET WELDING END 90°
BRANCH OUTLET**

21



Model No. TT-730
**BUTT WELDING END 90°
BRANCH OUTLET**

24



Model No. TT-733
**SQUARE HEAD & ROUND
HEAD PLUG**

27

Model No. TT-723
THREADED END UNION

16



Model No. TT-725
SWAGED NIPPLE

19



Model No. TT-728
**BUTT WELDING END 90°
BRANCH OUTLET**

22



Model No. TT-731
**BUTT WELDING END 45°
BRANCH OUTLET**

25

Model No. TT-724
SOCKET WELD END UNION

17



Model No. TT-728
**THREADED END 90° BRANCH
OUTLET**

20



Model No. TT-729
**BUTT WELDING END 90°
BRANCH OUTLET**

23



Model No. TT-732
CAP

26

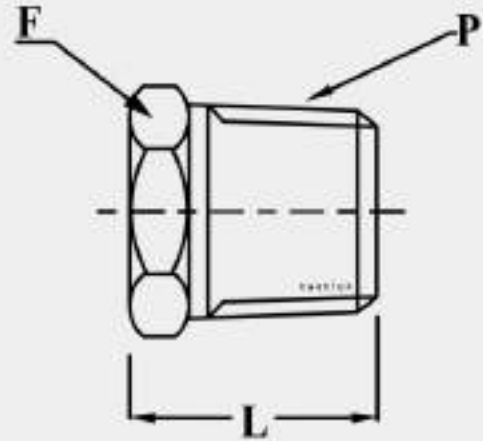
**DIMENSIONS OF SEAMLESS
STEEL PIPE AND SEAMLESS
STAINLESS STEEL PIPE**

28

WEIGHT LIST

29

PLUG / Model No. TT-701-P



6000 PSI (3K & 6K)

| Model No. | P Male NPT Size | L | F A/F |
|--------------|-----------------|------|-------|
| TT-701-P-2N | 1/8" | 16.0 | 12.7 |
| TT-701-P-4N | 1/4" | 21.0 | 14.0 |
| TT-701-P-6N | 3/8" | 21.0 | 19.0 |
| TT-701-P-8N | 1/2" | 25.0 | 22.0 |
| TT-701-P-12N | 3/4" | 28.0 | 28.0 |
| TT-701-P-16N | 1" | 34.0 | 36.0 |
| TT-701-P-20N | 1-1/4" | 37.0 | 46.0 |
| TT-701-P-24N | 1-1/2" | 40.0 | 50.0 |
| TT-701-P-32N | 2" | 45.0 | 65.0 |

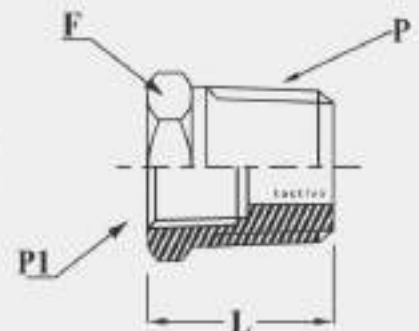
10000 PSI (10K)

| Model No. | P Male NPT Size | L | F A/F |
|------------------|-----------------|------|-------|
| TT-701-P-2N-10K | 1/8" | 20.0 | 14.0 |
| TT-701-P-4N-10K | 1/4" | 24.0 | 16.0 |
| TT-701-P-6N-10K | 3/8" | 24.0 | 22.0 |
| TT-701-P-8N-10K | 1/2" | 30.0 | 25.0 |
| TT-701-P-12N-10K | 3/4" | 30.0 | 32.0 |
| TT-701-P-16N-10K | 1" | 38.0 | 41.0 |
| TT-701-P-20N-10K | 1-1/4" | 40.0 | 50.0 |
| TT-701-P-24N-10K | 1-1/2" | 45.0 | 55.0 |
| TT-701-P-32N-10K | 2" | 50.0 | 70.0 |

BUSHING / Model No. TT-702

6000 PSI (3K & 6K)

| Model No. | P Male NPT Size | P1 Female NPT Size | L | F A/F |
|----------------|-----------------|--------------------|------|-------|
| TT-702-4N-2N | 1/4" NPT | 1/8" NPT | 21.0 | 14.0 |
| TT-702-6N-4N | 3/8" NPT | 1/4" NPT | 21.0 | 19.0 |
| TT-702-8N-4N | 1/2" NPT | 3/8" NPT | 26.0 | 22.0 |
| TT-702-12N-8N | 3/4" NPT | 1/2" NPT | 27.0 | 28.0 |
| TT-702-16N-12N | 1" NPT | 3/4" NPT | 36.0 | 36.0 |



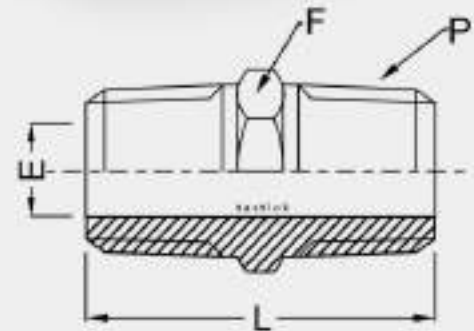
*End Connections other thread on Request.

Range of Seals (Graphoil, PTFE, PEEK etc..) and Materials (Inconel, Monel, Hastelloy, Duplex etc..) available.

NIPPLE / Model No. TT-703

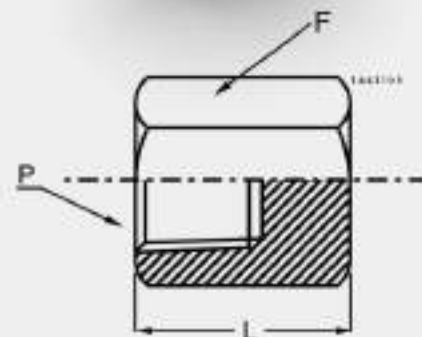
| Model No. | P Male NPT Size | L | E | F A/F |
|--------------|-----------------|------|------|-------|
| TT-703-N-2N | 1/8" NPT | 26.0 | 4.8 | 11.0 |
| TT-703-N-4N | 1/4" NPT | 35.6 | 7.0 | 14.0 |
| TT-703-N-6N | 3/8" NPT | 36.0 | 9.5 | 19.0 |
| TT-703-N-8N | 1/2" NPT | 46.7 | 11.8 | 22.0 |
| TT-703-N-12N | 3/4" NPT | 46.7 | 15.0 | 28.0 |
| TT-703-N-16N | 1" NPT | 58.5 | 22.0 | 36.0 |

*End Connections other thread on Request.



CAP / Model No. TT-704

| Model No. | P Male NPT Size | L | F A/F |
|--------------|-----------------|------|-------|
| TT-704-C-2N | 1/8" NPT | 19.0 | 14.0 |
| TT-704-C-4N | 1/4" NPT | 23.0 | 19.0 |
| TT-704-C-6N | 3/8" NPT | 26.0 | 22.0 |
| TT-704-C-8N | 1/2" NPT | 32.0 | 27.0 |
| TT-704-C-12N | 3/4" NPT | 34.0 | 32.0 |
| TT-704-C-16N | 1" NPT | 40.0 | 41.0 |

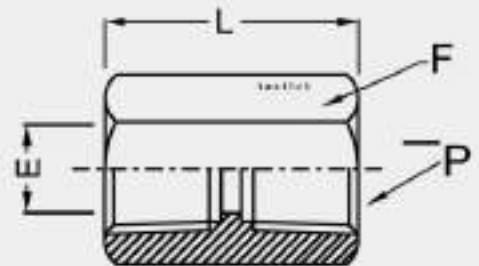


Range of Seals (Graphoil, PTFE, PEEK etc..) and Materials (Inconel, Monel, Hastelloy, Duplex etc..) available.

COUPLING / Model No. TT-705

| Model No. | P Female NPT Size | L | E | F A/F |
|--------------|-------------------|------|------|-------|
| TT-705-C-2N | 1/8" NPT | 26.5 | 7.5 | 15.0 |
| TT-705-C-4N | 1/4" NPT | 29.5 | 10.5 | 19.0 |
| TT-705-C-6N | 3/8" NPT | 36.0 | 14.0 | 22.0 |
| TT-705-C-8N | 1/2" NPT | 39.5 | 16.5 | 27.0 |
| TT-705-C-12N | 3/4" NPT | 48.5 | 22.0 | 32.0 |
| TT-705-C-16N | 1" NPT | 48.5 | 28.0 | 41.0 |

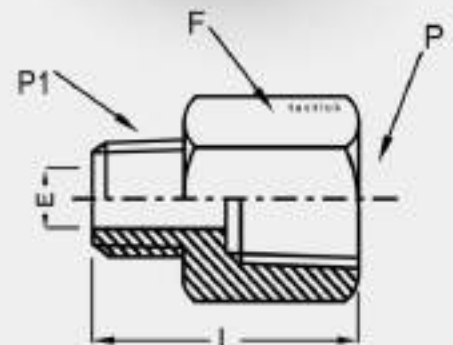
*End Connections other thread on Request.



ADAPTOR / Model No. TT-706

| Model No. | P Female NPT Size | P1 Male NPT Size | L | E | F A/F |
|--------------|-------------------|------------------|------|------|-------|
| TT-706-C-2N | 1/8" NPT | 1/8" NPT | 27.9 | 4.8 | 14.0 |
| TT-706-C-4N | 1/4" NPT | 1/4" NPT | 35.6 | 7.0 | 19.0 |
| TT-706-C-6N | 3/8" NPT | 3/8" NPT | 38.4 | 9.5 | 22.0 |
| TT-706-C-8N | 1/2" NPT | 1/2" NPT | 48.0 | 11.8 | 27.0 |
| TT-706-C-12N | 3/4" NPT | 3/4" NPT | 50.8 | 15.0 | 32.0 |
| TT-706-C-16N | 1" NPT | 1" NPT | 57.0 | 22.4 | 41.0 |

*End Connections other thread on Request.



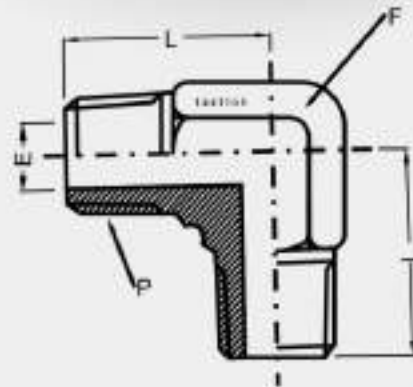
Range of Seals (Graphoil, PTFE, PEEK etc..) and Materials (Inconel, Monel, Hastelloy, Duplex etc..) available.

MALE ELBOW / Model No. TT-707



| Model No. | P Male NPT Size | L | E | F A/F |
|---------------|-----------------|------|------|-------|
| TT-707-ME-2N | 1/8" NPT | 22.4 | 4 | 14.0 |
| TT-707-ME-4N | 1/4" NPT | 26.7 | 7.1 | 14.0 |
| TT-707-ME-6N | 3/8" NPT | 29.7 | 9.5 | 17.0 |
| TT-707-ME-8N | 1/2" NPT | 36.8 | 11.8 | 22.0 |
| TT-707-ME-12N | 3/4" NPT | 38.8 | 15.6 | 27.0 |
| TT-707-ME-16N | 1" NPT | 45.2 | 22.0 | 35.0 |

*End Connections other thread on Request.

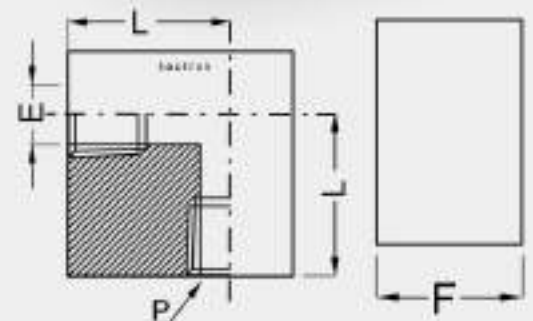


FEMALE ELBOW / Model No. TT-708



| Model No. | P Male & Female NPT Size | L | E | F A/F |
|---------------|--------------------------|------|------|-------|
| TT-708-FE-2N | 1/8" NPT | 26.4 | 7.5 | 15.0 |
| TT-708-FE-4N | 1/4" NPT | 29.7 | 10.5 | 19.0 |
| TT-708-FE-6N | 3/8" NPT | 36.1 | 14.0 | 22.0 |
| TT-708-FE-8N | 1/2" NPT | 39.8 | 16.5 | 27.0 |
| TT-708-FE-12N | 3/4" NPT | 48.8 | 22.0 | 32.0 |
| TT-708-FE-16N | 1" NPT | 48.5 | 28.0 | 41.0 |

*End Connections other thread on Request.



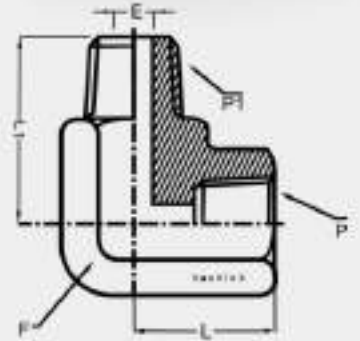
Range of Seals (Graphoil, PTFE, PEEK etc..) and Materials (Inconel, Monel, Hastelloy, Duplex etc..) available.



STREET ELBOW / Model No. TT-709

| Model No. | P Female NPT Size | P1 Male NPT Size | L | L1 | F A/F |
|-------------------|-------------------|------------------|------|------|-------|
| TT-709-SE-2N-4N | 1/4" NPT | 1/4" NPT | 29.8 | 29.8 | 19.0 |
| TT-709-SE-6N-4N | 3/8" NPT | 1/4" NPT | 36.1 | 32.0 | 22.0 |
| TT-709-SE-6N-6N | 3/8" NPT | 3/8" NPT | 36.1 | 32.0 | 22.0 |
| TT-709-SE-8N-4N | 1/2" NPT | 1/4" NPT | 39.5 | 35.0 | 27.0 |
| TT-709-SE-8N-8N | 3/4" NPT | 1/2" NPT | 39.5 | 39.6 | 27.0 |
| TT-709-SE-12N-12N | 1" NPT | 3/4" NPT | 48.8 | 32.4 | 32.0 |

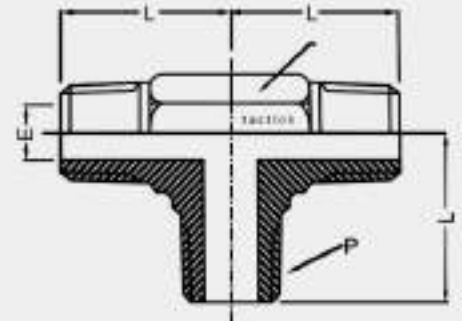
*End Connections other thread on Request.



MALE TEE / Model No. TT-710

| Model No. | P Male & Female NPT Size | L | E | F A/F |
|---------------|--------------------------|------|------|-------|
| TT-710-MT-2N | 1/8" NPT | 22.4 | 4.0 | 11.0 |
| TT-710-MT-4N | 1/4" NPT | 26.7 | 7.1 | 14.0 |
| TT-710-MT-6N | 3/8" NPT | 29.7 | 9.5 | 17.0 |
| TT-710-MT-8N | 1/2" NPT | 36.8 | 11.8 | 22.0 |
| TT-710-MT-12N | 3/4" NPT | 38.0 | 15.6 | 27.0 |
| TT-710-MT-16N | 1" NPT | 47.6 | 22.0 | 35.0 |

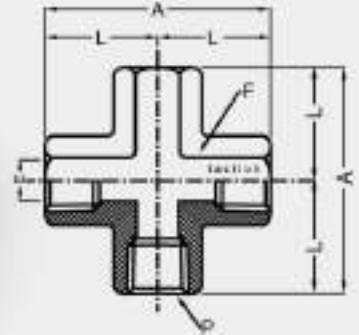
*End Connections other thread on Request.



Range of Seals (Graphoil, PTFE, PEEK etc..) and Materials (Inconel, Monel, Hastelloy, Duplex etc..) available.

FEMALE CROSS / Model No. TT-711

| Model No. | P Male & Female NPT Size | L | E | F A/F |
|---------------|--------------------------|------|------|-------|
| TT-711-FC-2N | 1/8" NPT | 22.4 | 4.8 | 11.0 |
| TT-711-FC-4N | 1/4" NPT | 29.7 | 7.0 | 16.0 |
| TT-711-FC-6N | 3/8" NPT | 29.7 | 9.6 | 19.0 |
| TT-711-FC-8N | 1/2" NPT | 36.8 | 11.9 | 22.0 |
| TT-711-FC-12N | 3/4" NPT | 48.0 | 15.8 | 27.0 |
| TT-711-FC-16N | 1" NPT | 47.6 | 22.0 | 35.0 |



*End Connections other thread on Request.

FEMALE TEE / Model No. TT-712

| Model No. | P Male & Female NPT Size | L | E | F A/F |
|---------------|--------------------------|------|------|-------|
| TT-712-FT-2N | 1/8" NPT | 26.5 | 7.5 | 15.0 |
| TT-712-FT-4N | 1/4" NPT | 29.5 | 10.5 | 19.0 |
| TT-712-FT-6N | 3/8" NPT | 36.0 | 14.0 | 22.0 |
| TT-712-FT-8N | 1/2" NPT | 39.5 | 16.5 | 27.0 |
| TT-712-FT-12N | 3/4" NPT | 48.5 | 22.0 | 32.0 |
| TT-712-FT-16N | 1" NPT | 48.5 | 28.0 | 41.0 |

*End Connections other thread on Request.

6K

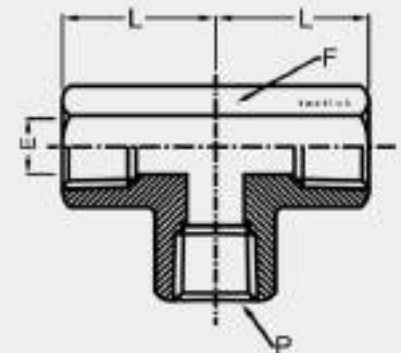
| Model No. | P Male & Female NPT Size | L | E | F A/F |
|------------------|--------------------------|------|------|-------|
| TT-712-FT-6K-4N | 1/4" NPT | 29.7 | 7.0 | 25.0 |
| TT-712-FT-6K-6N | 3/8" NPT | 36.1 | 9.5 | 28.0 |
| TT-712-FT-6K-8N | 1/2" NPT | 39.8 | 11.8 | 32.0 |
| TT-712-FT-6K-12N | 3/4" NPT | 48.8 | 15.0 | 41.0 |
| TT-712-FT-6K-16N | 1" NPT | 48.5 | 22.0 | 52.0 |

*End Connections other thread on Request.

10K

| Model No. | P Male & Female NPT Size | L | E | F A/F |
|-------------------|--------------------------|------|------|-------|
| TT-712-FT-10K-4N | 1/4" NPT | 29.7 | 4.5 | 32.0 |
| TT-712-FT-10K-6N | 3/8" NPT | 36.1 | 6.0 | 32.0 |
| TT-712-FT-10K-8N | 1/2" NPT | 39.8 | 8.0 | 36.0 |
| TT-712-FT-10K-12N | 3/4" NPT | 48.8 | 9.5 | 50.0 |
| TT-712-FT-10K-16N | 1" NPT | 48.5 | 12.0 | 65.0 |

*End Connections other thread on Request.



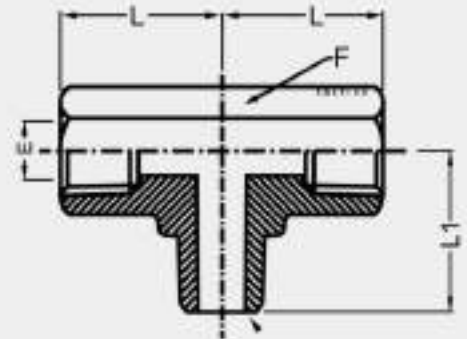
Range of Seals (Graphoil, PTFE, PEEK etc.) and Materials (Inconel, Monel, Hastelloy, Duplex etc.) available.



BRANCH TEE / Model No. TT-713

| Model No. | P Male & Female NPT Size | L | L1 | E | F A/F |
|---------------|--------------------------|------|------|------|-------|
| TT-713-BT-2N | 1/8" NPT | 26.4 | 22.1 | 4.5 | 15.0 |
| TT-713-BT-4N | 1/4" NPT | 29.7 | 29.7 | 7.0 | 19.0 |
| TT-713-BT-6N | 3/8" NPT | 36.1 | 32.0 | 9.5 | 22.0 |
| TT-713-BT-8N | 1/2" NPT | 39.6 | 39.6 | 11.8 | 27.0 |
| TT-713-BT-12N | 3/4" NPT | 48.7 | 49.0 | 15.0 | 32.0 |
| TT-713-BT-16N | 1" NPT | 48.5 | 49.0 | 22.0 | - |

*End Connections other thread on Request.



ROUND COUPLING / Model No. TT-714

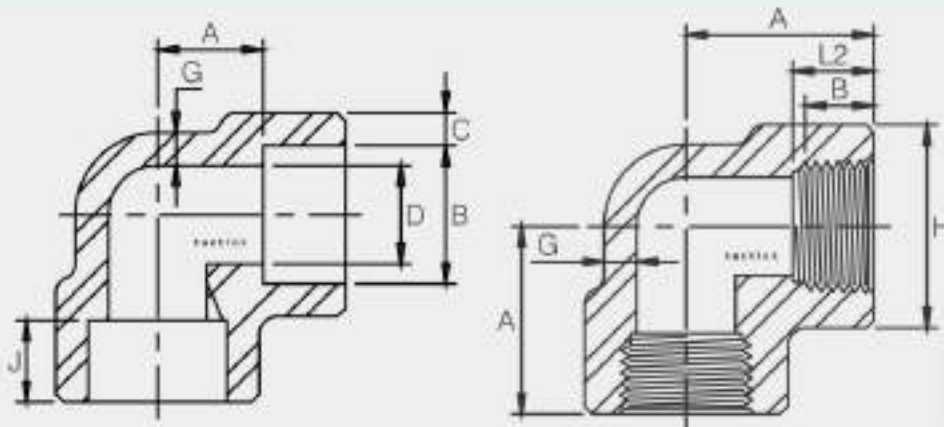
| Model No. | P Male & Female NPT Size | 3000PSI | | 6000PSI | |
|---------------|--------------------------|---------|----|---------|----|
| | | L | ØD | L | ØD |
| TT-714-RC-4N | 1/4" NPT | 35 | 20 | 35 | 25 |
| TT-714-RC-6N | 3/8" NPT | 38 | 22 | 38 | 32 |
| TT-714-RC-8N | 1/2" NPT | 48 | 23 | 48 | 38 |
| TT-714-RC-12N | 3/4" NPT | 51 | 35 | 51 | 44 |
| TT-714-RC-16N | 1" NPT | 60 | 44 | 60 | 57 |
| TT-714-RC-20N | 1-1/4" NPT | 67 | 57 | 67 | 64 |
| TT-714-RC-24N | 1-1/2" NPT | 79 | 64 | 79 | 76 |
| TT-714-RC-32N | 1" NPT | 86 | 76 | 86 | 92 |

*End Connections other thread on Request.

Range of Seals (Graphoil, PTFE, PEEK etc..) and Materials (Inconel, Monel, Hastelloy, Duplex etc..) available.

90° ELBOW

Model No. TT-715



| Socket Welding | | | | | | | | |
|----------------|----------------|----------------|----------------|-------|----------------|----------------|---------|---------|
| DN | Nom. Pipe Size | B ¹ | C ² | | D ³ | A ⁴ | G (Min) | J (Min) |
| | | | (Avg) | (Min) | | | | |

3000 Lb

| | | | | | | | | |
|-----|-------|-------|-------|------|-------|------|------|------|
| 6 | 1/8 | 10.8 | 3.18 | 3.18 | 6.9 | 11.0 | 2.41 | 9.5 |
| 8 | 1/4 | 14.2 | 3.78 | 3.30 | 8.3 | 11.0 | 3.02 | 9.5 |
| 10 | 3/8 | 17.6 | 4.01 | 3.50 | 12.6 | 13.5 | 3.20 | 9.5 |
| 15 | 1/2 | 21.8 | 4.67 | 4.09 | 15.8 | 15.5 | 3.73 | 9.5 |
| 20 | 3/4 | 27.2 | 4.90 | 4.27 | 21.0 | 19.0 | 3.91 | 12.5 |
| 25 | 1 | 33.9 | 5.69 | 4.98 | 26.7 | 22.5 | 4.55 | 12.5 |
| 32 | 1-1/4 | 42.7 | 6.07 | 5.28 | 35.1 | 27.0 | 4.85 | 12.5 |
| 40 | 1-1/2 | 48.8 | 6.35 | 5.54 | 40.9 | 32.0 | 5.08 | 12.5 |
| 50 | 2 | 61.2 | 6.93 | 6.04 | 52.5 | 38.0 | 5.54 | 16.0 |
| 65 | 2-1/2 | 73.9 | 8.76 | 7.67 | 62.7 | 41.0 | 7.01 | 16.0 |
| 80 | 3 | 89.8 | 9.52 | 8.30 | 78.0 | 57.0 | 7.62 | 16.0 |
| 100 | 4 | 115.2 | 10.69 | 9.35 | 102.3 | 66.5 | 8.56 | 19.0 |

6000 Lb

| | | | | | | | | |
|----|-------|------|-------|------|------|------|------|------|
| 6 | 1/8 | 10.8 | 3.96 | 3.43 | 4.0 | 11.0 | 3.15 | 9.5 |
| 8 | 1/4 | 14.2 | 4.60 | 4.01 | 6.4 | 13.5 | 3.66 | 9.5 |
| 10 | 3/8 | 17.6 | 5.03 | 4.37 | 9.2 | 15.5 | 4.01 | 9.5 |
| 15 | 1/2 | 21.8 | 5.97 | 5.18 | 11.8 | 19.0 | 4.78 | 9.5 |
| 20 | 3/4 | 27.2 | 6.96 | 6.04 | 15.6 | 22.5 | 5.56 | 12.5 |
| 25 | 1 | 33.9 | 7.92 | 6.93 | 20.7 | 27.0 | 6.35 | 12.5 |
| 32 | 1-1/4 | 42.7 | 7.92 | 6.93 | 29.5 | 32.0 | 6.35 | 12.5 |
| 40 | 1-1/2 | 48.8 | 8.92 | 7.80 | 34.0 | 38.0 | 7.14 | 12.5 |
| 50 | 2 | 61.2 | 10.92 | 9.50 | 42.9 | 41.0 | 8.74 | 16.0 |

9000 Lb

| | | | | | | | | |
|----|-------|------|-------|-------|------|------|-------|------|
| 15 | 1/2 | 21.8 | 9.35 | 8.18 | 6.4 | 25.5 | 7.47 | 9.5 |
| 20 | 3/4 | 27.2 | 9.78 | 8.56 | 11.1 | 28.5 | 7.82 | 12.5 |
| 25 | 1 | 33.9 | 11.38 | 9.98 | 15.2 | 32.0 | 9.09 | 12.5 |
| 32 | 1-1/4 | 42.7 | 12.14 | 10.62 | 22.8 | 35.0 | 9.70 | 12.5 |
| 40 | 1-1/2 | 48.8 | 12.70 | 11.12 | 28.0 | 38.0 | 10.15 | 12.5 |
| 50 | 2 | 61.2 | 13.84 | 12.12 | 38.2 | 54.0 | 11.07 | 16.0 |

Dimensions are in millimeters.

| Threaded | | | | | | |
|----------|----------------|------------------------|-----------------|---|---------|---|
| DN | Nom. Pipe Size | Length of Thread (Min) | | A | G (Min) | H |
| | | B ¹ | L2 ² | | | |

2000 Lb

| | | | | | | |
|-----|-------|------|------|-----|------|-----|
| 6 | 1/8 | 6.4 | 6.7 | 21 | 3.18 | 22 |
| 8 | 1/4 | 8.1 | 10.2 | 21 | 3.18 | 22 |
| 10 | 3/8 | 9.1 | 10.4 | 25 | 3.18 | 25 |
| 15 | 1/2 | 10.9 | 13.6 | 28 | 3.18 | 33 |
| 20 | 3/4 | 12.7 | 13.9 | 33 | 3.18 | 38 |
| 25 | 1 | 14.7 | 17.3 | 38 | 3.68 | 46 |
| 32 | 1-1/4 | 17.0 | 18.0 | 44 | 3.89 | 56 |
| 40 | 1-1/2 | 17.8 | 18.4 | 51 | 4.01 | 62 |
| 50 | 2 | 19.0 | 19.2 | 60 | 4.27 | 75 |
| 65 | 2-1/2 | 23.6 | 28.9 | 76 | 5.61 | 92 |
| 80 | 3 | 25.9 | 30.5 | 86 | 5.99 | 109 |
| 100 | 4 | 27.7 | 33.0 | 106 | 6.56 | 146 |

3000 Lb

| | | | | | | |
|-----|-------|------|------|-----|-------|-----|
| 6 | 1/8 | 6.4 | 6.7 | 21 | 3.18 | 22 |
| 8 | 1/4 | 8.1 | 10.2 | 25 | 3.30 | 25 |
| 10 | 3/8 | 9.1 | 10.4 | 28 | 3.51 | 33 |
| 15 | 1/2 | 10.9 | 13.6 | 33 | 4.09 | 38 |
| 20 | 3/4 | 12.7 | 13.9 | 38 | 4.32 | 46 |
| 25 | 1 | 14.7 | 17.3 | 44 | 4.98 | 56 |
| 32 | 1-1/4 | 17.0 | 18.0 | 51 | 5.28 | 62 |
| 40 | 1-1/2 | 17.8 | 18.4 | 60 | 5.56 | 75 |
| 50 | 2 | 19.0 | 19.2 | 64 | 7.14 | 84 |
| 65 | 2-1/2 | 23.6 | 28.9 | 83 | 7.65 | 102 |
| 80 | 3 | 25.9 | 30.5 | 95 | 8.84 | 121 |
| 100 | 4 | 27.7 | 33.0 | 114 | 11.18 | 152 |

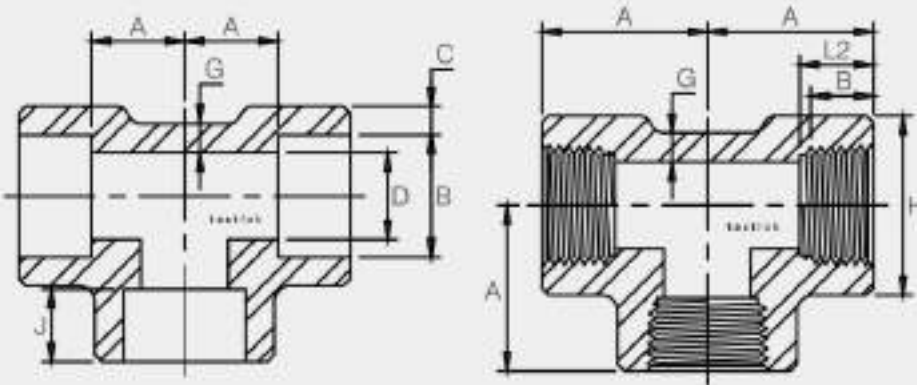
6000 Lb

| | | | | | | |
|-----|-------|------|------|-----|-------|-----|
| 6 | 1/8 | 6.4 | 6.7 | 25 | 6.35 | 25 |
| 8 | 1/4 | 8.1 | 10.2 | 28 | 6.60 | 33 |
| 10 | 3/8 | 9.1 | 10.4 | 33 | 6.98 | 38 |
| 15 | 1/2 | 10.9 | 13.6 | 38 | 8.15 | 46 |
| 20 | 3/4 | 12.7 | 13.9 | 44 | 8.53 | 56 |
| 25 | 1 | 14.7 | 17.3 | 51 | 9.93 | 62 |
| 32 | 1-1/4 | 17.0 | 18.0 | 60 | 10.59 | 75 |
| 40 | 1-1/2 | 17.8 | 18.4 | 64 | 11.07 | 84 |
| 50 | 2 | 19.0 | 19.2 | 83 | 12.09 | 102 |
| 65 | 2-1/2 | 23.6 | 28.9 | 95 | 15.29 | 121 |
| 80 | 3 | 25.9 | 30.5 | 106 | 16.64 | 146 |
| 100 | 4 | 27.7 | 33.0 | 114 | 18.67 | 152 |



TEE

Model No. TT-716



| Socket Welding | | | | | | | | |
|----------------|----------------|----|-------|-------|----|----|---------|---------|
| DN | Nom. Pipe Size | B" | C" | | D" | A" | G (Min) | J (Min) |
| | | | (Avg) | (Min) | | | | |

3000 Lb

| | | | | | | | | |
|-----|-------|-------|-------|------|-------|------|------|------|
| 6 | 1/8 | 10.9 | 3.18 | 3.18 | 6.9 | 11.0 | 2.41 | 9.5 |
| 8 | 1/4 | 14.2 | 3.78 | 3.30 | 9.3 | 11.0 | 3.02 | 9.5 |
| 10 | 3/8 | 17.5 | 4.01 | 3.50 | 12.6 | 13.5 | 3.20 | 9.5 |
| 15 | 1/2 | 21.8 | 4.67 | 4.09 | 15.8 | 15.5 | 3.73 | 9.5 |
| 20 | 3/4 | 27.2 | 4.90 | 4.27 | 21.0 | 19.0 | 3.91 | 12.5 |
| 25 | 1 | 33.9 | 5.09 | 4.99 | 26.7 | 22.5 | 4.55 | 12.5 |
| 32 | 1-1/4 | 42.7 | 6.07 | 5.29 | 35.1 | 27.0 | 4.85 | 12.5 |
| 40 | 1-1/2 | 48.8 | 6.35 | 5.54 | 40.9 | 32.0 | 5.08 | 12.5 |
| 50 | 2 | 61.2 | 6.93 | 6.04 | 52.5 | 38.0 | 5.54 | 16.0 |
| 65 | 2-1/2 | 73.9 | 8.76 | 7.67 | 62.7 | 41.0 | 7.01 | 16.0 |
| 90 | 3 | 99.9 | 9.52 | 8.30 | 79.0 | 57.0 | 7.62 | 16.0 |
| 100 | 4 | 115.2 | 10.65 | 9.35 | 102.3 | 66.5 | 8.56 | 19.0 |

6000 Lb

| | | | | | | | | |
|----|-------|------|-------|------|------|------|------|------|
| 6 | 1/8 | 10.8 | 3.96 | 3.43 | 4.0 | 11.0 | 3.15 | 9.5 |
| 8 | 1/4 | 14.2 | 4.60 | 4.01 | 6.4 | 13.5 | 3.68 | 9.5 |
| 10 | 3/8 | 17.6 | 5.03 | 4.37 | 9.2 | 15.5 | 4.01 | 9.5 |
| 15 | 1/2 | 21.8 | 5.97 | 5.18 | 11.8 | 19.0 | 4.78 | 9.5 |
| 20 | 3/4 | 27.2 | 6.96 | 6.04 | 15.6 | 22.5 | 5.56 | 12.5 |
| 25 | 1 | 33.9 | 7.92 | 6.93 | 20.7 | 27.0 | 6.35 | 12.5 |
| 32 | 1-1/4 | 42.7 | 7.92 | 6.93 | 29.5 | 32.0 | 6.35 | 12.5 |
| 40 | 1-1/2 | 48.8 | 8.92 | 7.80 | 34.0 | 38.0 | 7.14 | 12.5 |
| 50 | 2 | 61.2 | 10.92 | 9.50 | 42.9 | 41.0 | 8.74 | 16.0 |

9000 Lb

| | | | | | | | | |
|----|-------|------|-------|-------|------|------|-------|------|
| 15 | 1/2 | 21.8 | 9.35 | 8.18 | 6.4 | 25.5 | 7.47 | 9.5 |
| 20 | 3/4 | 27.2 | 9.78 | 8.56 | 11.1 | 28.5 | 7.82 | 12.5 |
| 25 | 1 | 33.9 | 11.38 | 9.96 | 15.2 | 32.0 | 9.09 | 12.5 |
| 32 | 1-1/4 | 42.7 | 12.14 | 10.62 | 22.8 | 35.0 | 9.70 | 12.5 |
| 40 | 1-1/2 | 48.8 | 12.70 | 11.12 | 28.0 | 38.0 | 10.15 | 12.5 |
| 50 | 2 | 61.2 | 13.84 | 12.12 | 38.2 | 54.0 | 11.07 | 16.0 |

Dimensions are in millimeters.

| Threaded | | | | | | |
|----------|----------------|------------------------|-----|---|---------|---|
| DN | Nom. Pipe Size | Length of Thread (Min) | | A | G (Min) | H |
| | | B" | L2" | | | |

2000 Lb

| | | | | | | |
|-----|-------|------|------|-----|------|-----|
| 6 | 1/8 | 6.4 | 6.7 | 21 | 3.18 | 22 |
| 8 | 1/4 | 8.1 | 10.2 | 21 | 3.18 | 22 |
| 10 | 3/8 | 8.1 | 10.4 | 25 | 3.18 | 25 |
| 15 | 1/2 | 10.9 | 13.6 | 28 | 3.18 | 33 |
| 20 | 3/4 | 12.7 | 13.9 | 33 | 3.18 | 38 |
| 25 | 1 | 14.7 | 17.3 | 38 | 3.68 | 46 |
| 32 | 1-1/4 | 17.0 | 18.0 | 44 | 3.89 | 56 |
| 40 | 1-1/2 | 17.8 | 18.4 | 51 | 4.01 | 62 |
| 50 | 2 | 19.0 | 19.2 | 60 | 4.27 | 75 |
| 65 | 2-1/2 | 23.6 | 28.9 | 76 | 5.61 | 92 |
| 80 | 3 | 25.9 | 30.5 | 86 | 5.99 | 109 |
| 100 | 4 | 27.7 | 33.0 | 106 | 6.55 | 146 |

3000 Lb

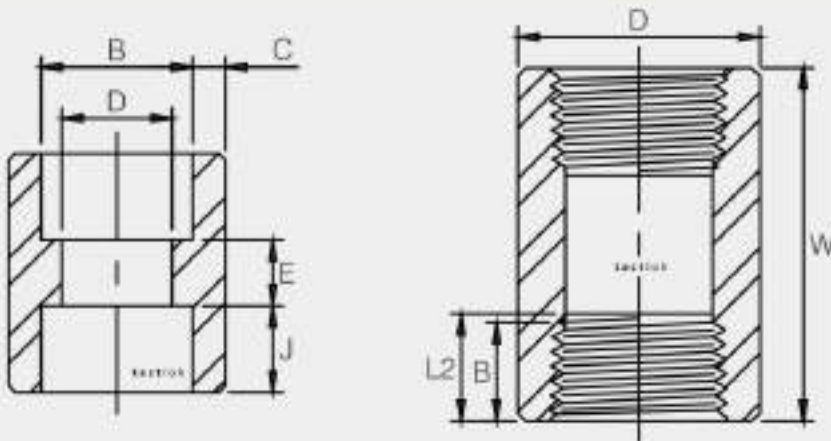
| | | | | | | |
|-----|-------|------|------|-----|-------|-----|
| 6 | 1/8 | 6.4 | 6.7 | 21 | 3.18 | 22 |
| 8 | 1/4 | 8.1 | 10.2 | 25 | 3.30 | 25 |
| 10 | 3/8 | 9.1 | 10.4 | 26 | 3.51 | 33 |
| 15 | 1/2 | 10.9 | 13.6 | 33 | 4.09 | 38 |
| 20 | 3/4 | 12.7 | 13.9 | 36 | 4.32 | 46 |
| 25 | 1 | 14.7 | 17.3 | 44 | 4.99 | 56 |
| 32 | 1-1/4 | 17.0 | 18.0 | 51 | 5.26 | 62 |
| 40 | 1-1/2 | 17.8 | 18.4 | 60 | 5.56 | 75 |
| 50 | 2 | 19.0 | 19.2 | 64 | 7.14 | 84 |
| 65 | 2-1/2 | 23.6 | 28.9 | 83 | 7.65 | 102 |
| 80 | 3 | 25.9 | 30.5 | 95 | 8.64 | 121 |
| 100 | 4 | 27.7 | 33.0 | 114 | 11.18 | 152 |

6000 Lb

| | | | | | | |
|-----|-------|------|------|-----|-------|-----|
| 6 | 1/8 | 6.4 | 6.7 | 25 | 6.35 | 25 |
| 8 | 1/4 | 8.1 | 10.2 | 26 | 6.60 | 33 |
| 10 | 3/8 | 9.1 | 10.4 | 33 | 6.98 | 36 |
| 15 | 1/2 | 10.9 | 13.6 | 38 | 8.15 | 46 |
| 20 | 3/4 | 12.7 | 13.9 | 44 | 8.53 | 56 |
| 25 | 1 | 14.7 | 17.3 | 51 | 9.93 | 62 |
| 32 | 1-1/4 | 17.0 | 18.0 | 60 | 10.59 | 75 |
| 40 | 1-1/2 | 17.8 | 18.4 | 64 | 11.07 | 84 |
| 50 | 2 | 19.0 | 19.2 | 83 | 12.09 | 102 |
| 65 | 2-1/2 | 23.6 | 28.9 | 95 | 15.29 | 121 |
| 80 | 3 | 25.9 | 30.5 | 106 | 16.64 | 146 |
| 100 | 4 | 27.7 | 33.0 | 114 | 18.67 | 152 |

FULL COUPLING

Model No. TT-717



| Socket Welding | | | | | | | |
|----------------|----------------|-----------------|-----------------|-------|-----------------|-----------------|---------|
| DN | Nom. Pipe Size | B ^{mm} | C ^{mm} | | D ^{mm} | E ^{mm} | J (Min) |
| | | | (Avg) | (Min) | | | |

3000 Lb

| | | | | | | | |
|-----|-------|-------|-------|------|-------|------|------|
| 8 | 1/8 | 10.8 | 3.18 | 3.18 | 8.9 | 6.5 | 9.5 |
| 8 | 1/4 | 14.2 | 3.78 | 3.30 | 9.3 | 6.5 | 9.5 |
| 10 | 3/8 | 17.6 | 4.01 | 3.50 | 12.6 | 6.5 | 9.5 |
| 15 | 1/2 | 21.8 | 4.67 | 4.09 | 15.8 | 9.5 | 9.5 |
| 20 | 3/4 | 27.2 | 4.90 | 4.27 | 21.0 | 9.5 | 12.5 |
| 25 | 1 | 33.9 | 5.69 | 4.98 | 26.7 | 12.5 | 12.5 |
| 32 | 1-1/4 | 42.7 | 6.07 | 5.28 | 35.1 | 12.5 | 12.5 |
| 40 | 1-1/2 | 48.8 | 6.35 | 5.54 | 40.8 | 12.5 | 12.5 |
| 50 | 2 | 61.2 | 8.93 | 6.04 | 52.5 | 19.0 | 16.0 |
| 65 | 2-1/2 | 73.9 | 8.76 | 7.67 | 62.7 | 19.0 | 16.0 |
| 80 | 3 | 89.8 | 9.52 | 8.30 | 78.0 | 19.0 | 16.0 |
| 100 | 4 | 115.2 | 10.69 | 9.35 | 102.3 | 19.0 | 19.0 |

6000 Lb

| | | | | | | | |
|----|-------|------|-------|------|------|------|------|
| 8 | 1/8 | 10.8 | 3.96 | 3.43 | 4.0 | 6.5 | 9.5 |
| 8 | 1/4 | 14.2 | 4.60 | 4.01 | 6.4 | 6.5 | 9.5 |
| 10 | 3/8 | 17.6 | 5.03 | 4.37 | 9.2 | 6.5 | 9.5 |
| 15 | 1/2 | 21.8 | 5.97 | 5.19 | 11.8 | 9.5 | 9.5 |
| 20 | 3/4 | 27.2 | 6.96 | 6.04 | 15.6 | 9.5 | 12.5 |
| 25 | 1 | 33.9 | 7.92 | 6.93 | 20.7 | 12.5 | 12.5 |
| 32 | 1-1/4 | 42.7 | 7.92 | 6.93 | 29.5 | 12.5 | 12.5 |
| 40 | 1-1/2 | 48.8 | 8.92 | 7.80 | 34.0 | 12.5 | 12.5 |
| 50 | 2 | 61.2 | 10.92 | 8.50 | 42.9 | 19.0 | 16.0 |

9000 Lb

| | | | | | | | |
|----|-------|------|-------|-------|------|------|------|
| 15 | 1/2 | 21.8 | 9.35 | 8.16 | 6.4 | 9.5 | 9.5 |
| 20 | 3/4 | 27.2 | 9.78 | 8.56 | 11.1 | 9.5 | 12.5 |
| 25 | 1 | 33.9 | 11.38 | 9.96 | 15.2 | 12.5 | 12.5 |
| 32 | 1-1/4 | 42.7 | 12.14 | 10.62 | 22.8 | 12.5 | 12.5 |
| 40 | 1-1/2 | 48.8 | 12.70 | 11.12 | 28.0 | 12.5 | 12.5 |
| 50 | 2 | 61.2 | 13.84 | 12.12 | 38.2 | 19.0 | 16.0 |

Dimensions are in millimeters.

| Threaded | | | | | |
|----------|----------------|------------------------|------------------|---|---|
| DN | Nom. Pipe Size | Length of Thread (Min) | | W | D |
| | | B ^{mm} | L2 ^{mm} | | |

3000 Lb

| | | | | | |
|-----|-------|------|------|-----|-----|
| 8 | 1/8 | 6.4 | 6.7 | 32 | 16 |
| 8 | 1/4 | 8.1 | 10.2 | 35 | 19 |
| 10 | 3/8 | 9.1 | 10.4 | 38 | 22 |
| 15 | 1/2 | 10.9 | 13.6 | 48 | 28 |
| 20 | 3/4 | 12.7 | 13.9 | 51 | 35 |
| 25 | 1 | 14.7 | 17.3 | 60 | 44 |
| 32 | 1-1/4 | 17.0 | 18.0 | 67 | 57 |
| 40 | 1-1/2 | 17.8 | 18.4 | 79 | 64 |
| 50 | 2 | 19.0 | 19.2 | 86 | 76 |
| 65 | 2-1/2 | 23.6 | 28.9 | 92 | 92 |
| 80 | 3 | 25.9 | 30.5 | 108 | 108 |
| 100 | 4 | 27.7 | 33.0 | 121 | 140 |

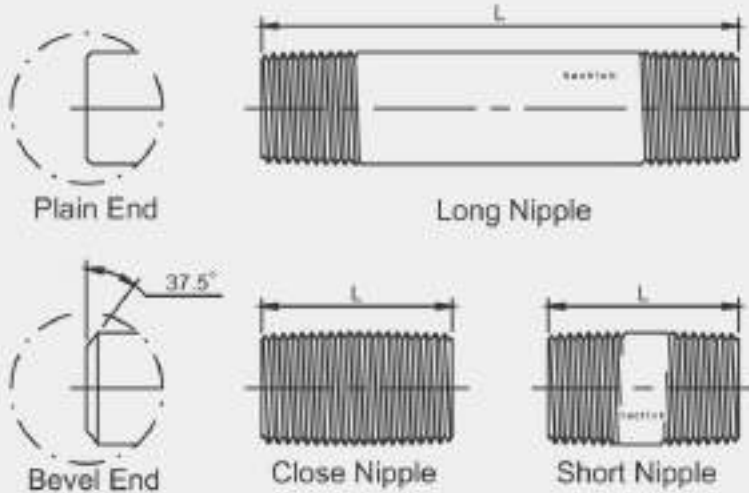
6000 Lb

| | | | | | |
|-----|-------|------|------|-----|-----|
| 8 | 1/8 | 6.4 | 6.7 | 32 | 22 |
| 8 | 1/4 | 8.1 | 10.2 | 35 | 25 |
| 10 | 3/8 | 9.1 | 10.4 | 38 | 32 |
| 15 | 1/2 | 10.9 | 13.6 | 48 | 38 |
| 20 | 3/4 | 12.7 | 13.9 | 51 | 44 |
| 25 | 1 | 14.7 | 17.3 | 60 | 57 |
| 32 | 1-1/4 | 17.0 | 18.0 | 67 | 64 |
| 40 | 1-1/2 | 17.8 | 18.4 | 79 | 76 |
| 50 | 2 | 19.0 | 19.2 | 86 | 92 |
| 65 | 2-1/2 | 23.6 | 28.9 | 92 | 108 |
| 80 | 3 | 25.9 | 30.5 | 108 | 127 |
| 100 | 4 | 27.7 | 33.0 | 121 | 158 |



NIPPLE

Model No. TT-718



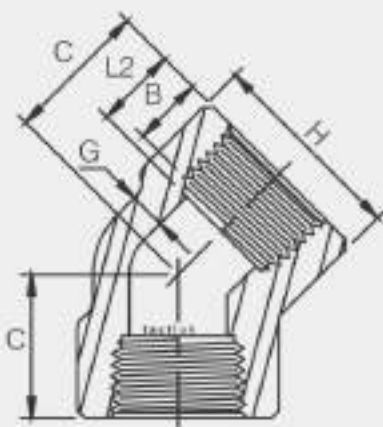
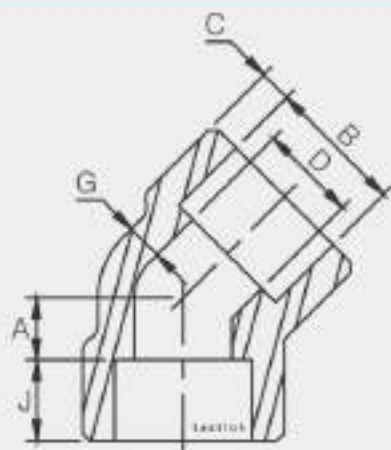
Plain End Weight (Kg) per meter

| Nom. Pipe Size | L | | | Weight | | | |
|----------------|--------------|--------------|-------------|------------|-----------|---------|-------|
| | Close Nipple | Short Nipple | Long Nipple | Sch 40/STD | Sch 80/XS | Sch 160 | XXS |
| 1/8 | 3/4 | 1-1/2 | 2-12 | 0.37 | 0.47 | - | - |
| 1/4 | 7/8 | 1-1/2 | 2-12 | 0.63 | 0.80 | - | - |
| 3/8 | 1 | 1-1/2 | 2-12 | 0.84 | 1.10 | - | - |
| 1/2 | 1-1/8 | 1-1/2 | 2-12 | 1.27 | 1.62 | 1.95 | 2.55 |
| 3/4 | 1-3/8 | 1-1/2 | 2-12 | 1.69 | 2.20 | 2.90 | 3.64 |
| 1 | 1-1/2 | 2 | 2-1/2-12 | 2.50 | 3.24 | 4.24 | 5.45 |
| 1-1/4 | 1-5/8 | 2 | 2-1/2-12 | 3.39 | 4.47 | 5.61 | 7.77 |
| 1-1/2 | 1-3/4 | 2 | 2-1/2-12 | 4.05 | 5.41 | 7.25 | 9.56 |
| 2 | 2 | 2-1/2 | 3-12 | 5.44 | 7.48 | 11.11 | 13.44 |
| 2-1/2 | 2-1/2 | 3 | 3-1/2-12 | 8.63 | 11.41 | 14.92 | 20.39 |
| 3 | 2-5/8 | 3 | 3-1/2-12 | 11.29 | 15.27 | 21.35 | 27.68 |
| 3-1/2 | 2-3/4 | 4 | 4-1/2-12 | 13.57 | 18.64 | - | - |
| 4 | 2-7/8 | 4 | 4-1/2-12 | 16.07 | 22.32 | 32.54 | 41.03 |
| 5 | 3 | 4-1/2 | 5-12 | 21.77 | 30.97 | 49.12 | 57.43 |
| 6 | 3-1/8 | 4-1/2 | 5-12 | 28.26 | 42.56 | 67.56 | 79.22 |

Dimensions in inch.

45° ELBOW

Model No. TT-719



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

3000 Lb

| | | | | | | | | |
|-----|-------|-------|-------|------|-------|------|------|------|
| 6 | 1/8 | 10.8 | 3.18 | 3.18 | 6.9 | 6.0 | 2.41 | 9.5 |
| 8 | 1/4 | 14.2 | 3.78 | 3.30 | 9.3 | 6.0 | 3.02 | 9.5 |
| 10 | 3/8 | 17.6 | 4.01 | 3.50 | 12.8 | 6.0 | 3.20 | 9.5 |
| 15 | 1/2 | 21.8 | 4.67 | 4.09 | 15.8 | 11.0 | 3.73 | 9.5 |
| 20 | 3/4 | 27.2 | 4.90 | 4.27 | 21.0 | 13.0 | 3.91 | 12.5 |
| 25 | 1 | 33.9 | 5.68 | 4.98 | 26.7 | 14.0 | 4.55 | 12.5 |
| 32 | 1-1/4 | 42.7 | 6.07 | 5.28 | 35.1 | 17.5 | 4.85 | 12.5 |
| 40 | 1-1/2 | 48.8 | 6.35 | 5.54 | 40.8 | 20.5 | 5.08 | 12.5 |
| 50 | 2 | 61.2 | 6.93 | 6.04 | 52.5 | 25.5 | 5.54 | 16.0 |
| 65 | 2-1/2 | 73.8 | 8.76 | 7.67 | 62.7 | 28.5 | 7.01 | 16.0 |
| 80 | 3 | 89.8 | 9.52 | 8.30 | 78.0 | 32.0 | 7.82 | 16.0 |
| 100 | 4 | 115.2 | 10.89 | 9.35 | 102.3 | 41.0 | 8.58 | 19.0 |

6000 Lb

| | | | | | | | | |
|----|-------|------|-------|------|------|------|------|------|
| 6 | 1/8 | 10.8 | 3.96 | 3.43 | 4.0 | 8.0 | 3.15 | 9.5 |
| 8 | 1/4 | 14.2 | 4.60 | 4.01 | 6.4 | 8.0 | 3.68 | 9.5 |
| 10 | 3/8 | 17.6 | 5.03 | 4.37 | 9.2 | 11.0 | 4.01 | 9.5 |
| 15 | 1/2 | 21.8 | 5.97 | 5.18 | 11.8 | 12.5 | 4.78 | 9.5 |
| 20 | 3/4 | 27.2 | 6.96 | 6.04 | 15.8 | 14.0 | 5.58 | 12.5 |
| 25 | 1 | 33.9 | 7.92 | 6.93 | 20.7 | 17.5 | 6.35 | 12.5 |
| 32 | 1-1/4 | 42.7 | 7.92 | 6.93 | 29.5 | 20.5 | 6.35 | 12.5 |
| 40 | 1-1/2 | 48.8 | 8.92 | 7.80 | 34.0 | 25.5 | 7.14 | 12.5 |
| 50 | 2 | 61.2 | 10.92 | 9.50 | 42.9 | 28.5 | 8.74 | 16.0 |

9000 Lb

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

Dimensions are in millimeters.

| Threaded | | | | | | |
|----------|----------------|------------------------|-----------------|---|---------|---|
| DN | Nom. Pipe Size | Length of Thread (Min) | | C | G (Min) | H |
| | | B ¹ | L2 ¹ | | | |

2000 Lb

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

3000 Lb

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

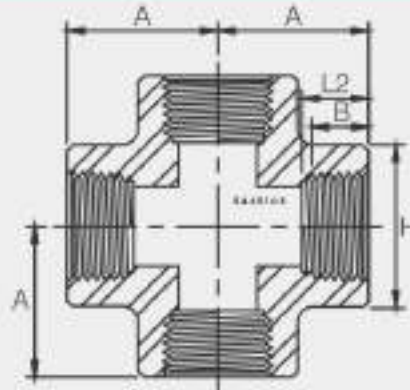
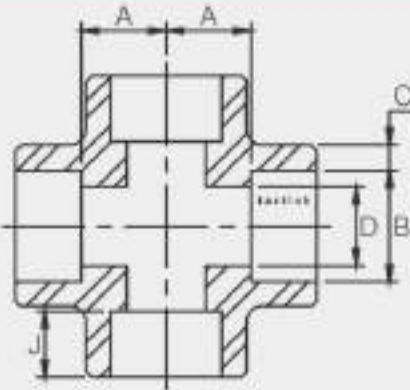
6000 Lb

| | | | | | | |
|-----|-------|------|------|----|-------|-----|
| 6 | 1/8 | 6.4 | 6.7 | 19 | 6.35 | 25 |
| 8 | 1/4 | 8.1 | 10.2 | 22 | 6.60 | 33 |
| 10 | 3/8 | 9.1 | 10.4 | 25 | 6.98 | 38 |
| 15 | 1/2 | 10.9 | 13.6 | 28 | 8.15 | 46 |
| 20 | 3/4 | 12.7 | 13.9 | 33 | 8.53 | 58 |
| 25 | 1 | 14.7 | 17.3 | 35 | 9.93 | 62 |
| 32 | 1-1/4 | 17.0 | 18.0 | 43 | 10.59 | 75 |
| 40 | 1-1/2 | 17.8 | 18.4 | 44 | 11.07 | 84 |
| 50 | 2 | 19.0 | 19.2 | 52 | 12.09 | 102 |
| 65 | 2-1/2 | 23.6 | 28.9 | 64 | 15.29 | 121 |
| 80 | 3 | 25.9 | 30.5 | 79 | 15.64 | 146 |
| 100 | 4 | 27.7 | 33.0 | 79 | 18.67 | 152 |



CROSS

Model No. TT-720



| Socket Welding | | | | | | | |
|----------------|----------------|-----------------|-----------------|-------|-----------------|-----------------|---------|
| DN | Nom. Pipe Size | B ²¹ | C ²¹ | | D ²¹ | A ²¹ | J (Min) |
| | | | (Avg) | (Min) | | | |

| 3000 Lb | | | | | | | |
|---------|-------|-------|-------|------|-------|------|------|
| 6 | 1/8 | 10.8 | 3.18 | 3.18 | 6.9 | 11.0 | 9.5 |
| 8 | 1/4 | 14.2 | 3.78 | 3.30 | 9.3 | 11.0 | 9.5 |
| 10 | 3/8 | 17.6 | 4.01 | 3.50 | 12.6 | 13.5 | 9.5 |
| 15 | 1/2 | 21.8 | 4.67 | 4.09 | 15.8 | 15.5 | 9.5 |
| 20 | 3/4 | 27.2 | 4.90 | 4.27 | 21.0 | 19.0 | 12.5 |
| 25 | 1 | 33.9 | 5.69 | 4.98 | 26.7 | 22.5 | 12.5 |
| 32 | 1-1/4 | 42.7 | 6.07 | 5.28 | 35.1 | 27.0 | 12.5 |
| 40 | 1-1/2 | 48.8 | 6.35 | 5.54 | 40.9 | 32.0 | 12.5 |
| 50 | 2 | 61.2 | 6.93 | 6.04 | 52.5 | 38.0 | 16.0 |
| 65 | 2-1/2 | 73.9 | 8.76 | 7.67 | 62.7 | 41.0 | 16.0 |
| 80 | 3 | 89.8 | 9.52 | 8.30 | 78.0 | 57.0 | 16.0 |
| 100 | 4 | 115.2 | 10.69 | 9.35 | 102.3 | 66.5 | 19.0 |

| 6000 Lb | | | | | | | |
|---------|-------|------|-------|------|------|------|------|
| 6 | 1/8 | 10.8 | 3.96 | 3.43 | 4.0 | 11.0 | 9.5 |
| 8 | 1/4 | 14.2 | 4.60 | 4.01 | 6.4 | 13.5 | 9.5 |
| 10 | 3/8 | 17.6 | 5.03 | 4.37 | 9.2 | 15.5 | 9.5 |
| 15 | 1/2 | 21.8 | 5.97 | 5.18 | 11.8 | 19.0 | 9.5 |
| 20 | 3/4 | 27.2 | 6.96 | 6.04 | 15.6 | 22.5 | 12.5 |
| 25 | 1 | 33.9 | 7.92 | 6.93 | 20.7 | 27.0 | 12.5 |
| 32 | 1-1/4 | 42.7 | 7.92 | 6.93 | 29.5 | 32.0 | 12.5 |
| 40 | 1-1/2 | 48.8 | 8.92 | 7.90 | 34.0 | 38.0 | 12.5 |
| 50 | 2 | 61.2 | 10.92 | 9.50 | 42.9 | 41.0 | 16.0 |

| 9000 Lb | | | | | | | |
|---------|-------|------|-------|-------|------|------|------|
| 15 | 1/2 | 21.8 | 9.35 | 8.18 | 6.4 | 25.5 | 9.5 |
| 20 | 3/4 | 27.2 | 9.78 | 8.56 | 11.1 | 28.5 | 12.5 |
| 25 | 1 | 33.9 | 11.38 | 9.96 | 15.2 | 32.0 | 12.5 |
| 32 | 1-1/4 | 42.7 | 12.14 | 10.62 | 22.8 | 35.0 | 12.5 |
| 40 | 1-1/2 | 48.8 | 12.70 | 11.12 | 28.0 | 38.0 | 12.5 |
| 50 | 2 | 61.2 | 13.84 | 12.12 | 38.2 | 54.0 | 16.0 |

Dimensions are in millimeters.

| Threaded | | | | | |
|----------|----------------|------------------------|-----------------|---|---|
| DN | Nom. Pipe Size | Length of Thread (Min) | | A | H |
| | | B ¹ | L2 ¹ | | |

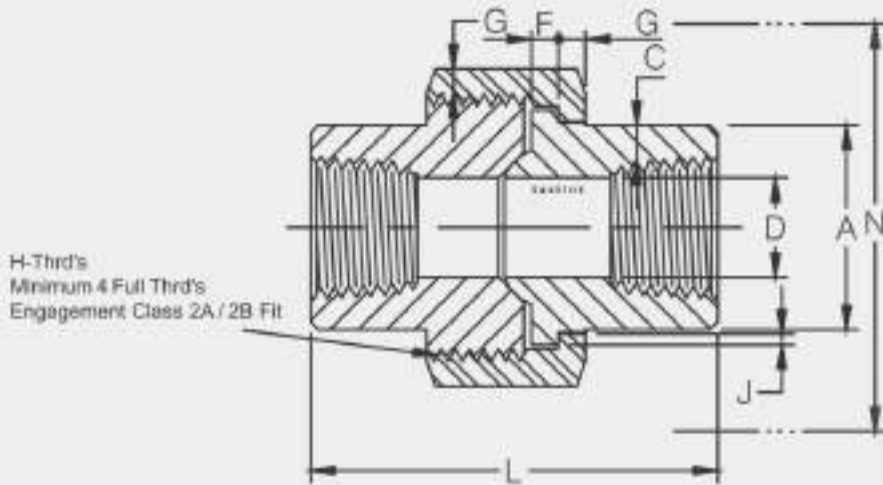
| 2000 Lb | | | | | |
|---------|-------|------|------|-----|-----|
| 6 | 1/8 | 6.4 | 6.7 | 21 | 22 |
| 8 | 1/4 | 8.1 | 10.2 | 21 | 22 |
| 10 | 3/8 | 9.1 | 10.4 | 25 | 25 |
| 15 | 1/2 | 10.9 | 13.6 | 28 | 33 |
| 20 | 3/4 | 12.7 | 13.9 | 33 | 38 |
| 25 | 1 | 14.7 | 17.3 | 38 | 46 |
| 32 | 1-1/4 | 17.0 | 18.0 | 44 | 56 |
| 40 | 1-1/2 | 17.8 | 18.4 | 51 | 62 |
| 50 | 2 | 19.0 | 19.2 | 60 | 75 |
| 65 | 2-1/2 | 23.6 | 28.9 | 76 | 92 |
| 80 | 3 | 25.9 | 30.5 | 86 | 109 |
| 100 | 4 | 27.7 | 33.0 | 106 | 146 |

| 3000 Lb | | | | | |
|---------|-------|------|------|-----|-----|
| 6 | 1/8 | 6.4 | 6.7 | 21 | 22 |
| 8 | 1/4 | 8.1 | 10.2 | 25 | 25 |
| 10 | 3/8 | 9.1 | 10.4 | 28 | 33 |
| 15 | 1/2 | 10.9 | 13.6 | 33 | 38 |
| 20 | 3/4 | 12.7 | 13.9 | 38 | 46 |
| 25 | 1 | 14.7 | 17.3 | 44 | 56 |
| 32 | 1-1/4 | 17.0 | 18.0 | 51 | 62 |
| 40 | 1-1/2 | 17.8 | 18.4 | 60 | 75 |
| 50 | 2 | 19.0 | 19.2 | 64 | 84 |
| 65 | 2-1/2 | 23.6 | 28.9 | 83 | 102 |
| 80 | 3 | 25.9 | 30.5 | 95 | 121 |
| 100 | 4 | 27.7 | 33.0 | 114 | 152 |

| 6000 Lb | | | | | |
|---------|-------|------|------|-----|-----|
| 6 | 1/8 | 6.4 | 6.7 | 25 | 25 |
| 8 | 1/4 | 8.1 | 10.2 | 28 | 33 |
| 10 | 3/8 | 9.1 | 10.4 | 33 | 38 |
| 15 | 1/2 | 10.9 | 13.6 | 38 | 46 |
| 20 | 3/4 | 12.7 | 13.9 | 44 | 56 |
| 25 | 1 | 14.7 | 17.3 | 51 | 62 |
| 32 | 1-1/4 | 17.0 | 18.0 | 60 | 75 |
| 40 | 1-1/2 | 17.8 | 18.4 | 64 | 84 |
| 50 | 2 | 19.0 | 19.2 | 83 | 102 |
| 65 | 2-1/2 | 23.6 | 28.9 | 95 | 121 |
| 80 | 3 | 25.9 | 30.5 | 106 | 146 |
| 100 | 4 | 27.7 | 33.0 | 114 | 152 |

THREADED END UNION

Model No. TT-721



3000 Lb

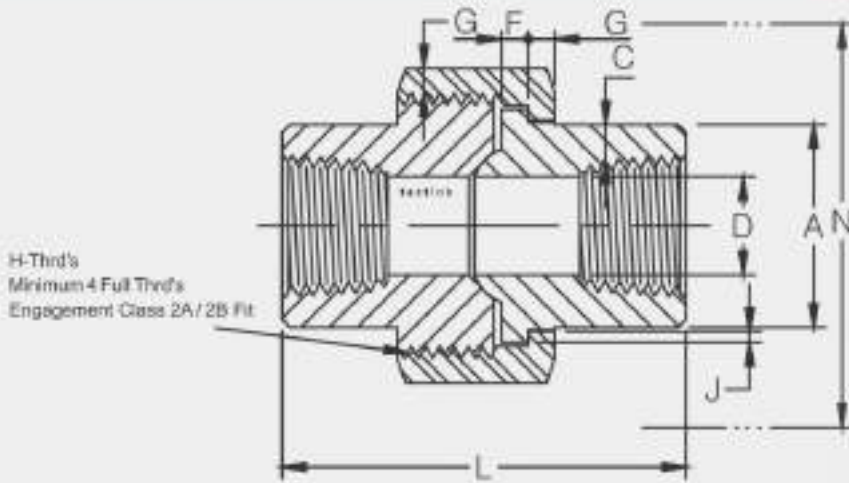
| Nom. Pipe Size | Pipe End (Min) A | Wall (Min) C | Water Way Bore D ¹⁾ | Male Flange (Min) F | Nut (Min) G | Thrds Per 25.4mm H | Bearing (Min) J | Length Assem. Nom. L | Clear Assem. Nut N |
|----------------|------------------|--------------|--------------------------------|---------------------|-------------|--------------------|-----------------|----------------------|--------------------|
| 1/8 | 14.7 | 2.41 | 8.43 6.43 | 3.18 | 3.18 | 16 | 1.24 | 41.4 | 50.8 |
| 1/4 | 19.0 | 3.02 | 11.13 9.45 | 3.18 | 3.18 | 16 | 1.24 | 41.4 | 50.8 |
| 3/8 | 22.9 | 3.20 | 14.27 13.51 | 3.43 | 3.43 | 14 | 1.37 | 46.0 | 55.9 |
| 1/2 | 27.7 | 3.73 | 17.88 17.07 | 3.68 | 3.68 | 14 | 1.50 | 49.0 | 58.4 |
| 3/4 | 33.5 | 3.91 | 23.01 21.39 | 4.08 | 4.08 | 11 | 1.68 | 56.9 | 66.0 |
| 1 | 41.5 | 4.55 | 28.98 27.74 | 4.57 | 4.45 | 11 | 1.85 | 62.0 | 78.7 |
| 1-1/4 | 50.5 | 4.85 | 37.69 35.36 | 5.33 | 5.21 | 10 | 2.13 | 71.1 | 94.0 |
| 1-1/2 | 57.2 | 5.08 | 43.54 41.20 | 5.84 | 5.59 | 10 | 2.31 | 76.5 | 111.8 |
| 2 | 70.1 | 5.54 | 55.58 52.12 | 6.60 | 6.35 | 10 | 2.69 | 86.1 | 132.1 |
| 2-1/2 | 85.3 | 7.01 | 68.27 64.31 | 7.49 | 7.11 | 8 | 3.07 | 102.4 | 149.9 |
| 3 | 102.4 | 7.62 | 82.55 77.27 | 8.26 | 8.00 | 8 | 3.53 | 109.0 | 175.3 |

Dimensions are in millimeters.



THREADED END UNION

Model No. TT-722



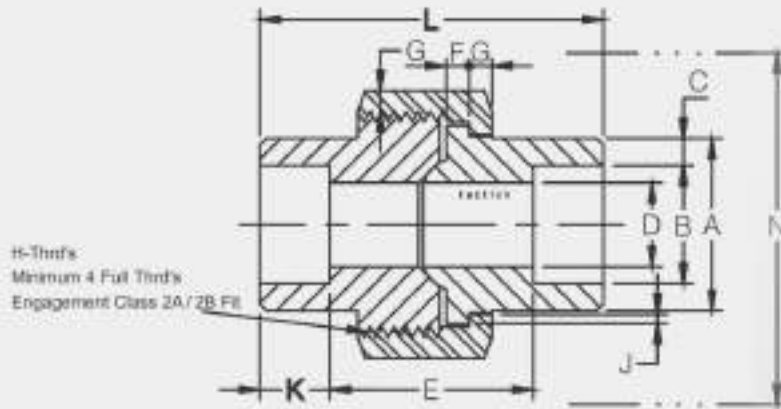
6000 Lb

| Nom. Pipe Size | Pipe End (Min) A | Wall (Min) C | Water Way Bore D ^{nom} | Male Flange (Min) F | Nut (Min) G | Thrds. Per 25.4mm H | Bearing (Min) J | Length Assem. Nom. L | Clear Assem. Nut N |
|----------------|------------------|--------------|---------------------------------|---------------------|-------------|---------------------|-----------------|----------------------|--------------------|
| 1/8 | 18.5 | 3.15 | 8.43 3.20 | 3.18 | 3.18 | 16 | 1.24 | 41.4 | 50.8 |
| 1/4 | 21.1 | 3.68 | 11.13 5.59 | 3.43 | 3.43 | 14 | 1.37 | 46.0 | 55.9 |
| 3/8 | 25.1 | 4.01 | 14.27 8.36 | 3.68 | 3.68 | 14 | 1.50 | 49.0 | 58.4 |
| 1/2 | 31.0 | 4.78 | 17.98 11.02 | 4.06 | 4.06 | 11 | 1.68 | 56.9 | 66.0 |
| 3/4 | 37.8 | 5.58 | 23.01 14.78 | 4.57 | 4.45 | 11 | 1.85 | 62.0 | 76.7 |
| 1 | 46.2 | 6.35 | 28.88 19.94 | 5.33 | 5.21 | 10 | 2.13 | 71.1 | 94.0 |
| 1-1/4 | 54.9 | 6.35 | 37.69 28.70 | 5.84 | 5.59 | 10 | 2.31 | 76.5 | 111.8 |
| 1-1/2 | 62.5 | 7.14 | 43.54 33.22 | 6.60 | 6.35 | 10 | 2.69 | 86.1 | 132.1 |
| 2 | 77.7 | 8.74 | 55.58 42.09 | 7.49 | 7.11 | 8 | 3.07 | 102.4 | 149.9 |
| 2-1/2 | 92.2 | 9.53 | 66.27 53.21 | 8.26 | 8.00 | 8 | 3.53 | 109.0 | 175.3 |
| 3 | 111.3 | 11.13 | 82.55 65.89 | 10.19 | 10.19 | 8 | 4.06 | 158 ^{mm} | 200.7 |

Dimensions are in millimeters.

SOCKET WELD UNION

Model No. TT-723



3000 Lb

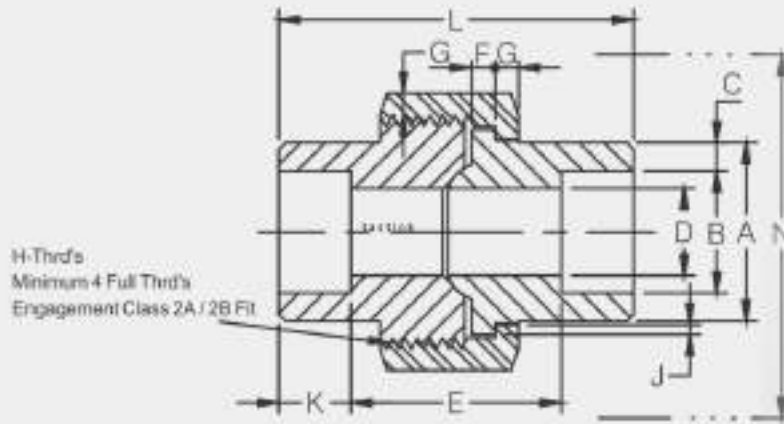
| Nom. Pipe Size | Pipe End (Min) A | Socket Bore Dia. B" | Socket Wall (Min) C | Water Way Bore D" | Laying Length E" | Male Flange (Min) F | Nut (Min) G | Thrds. Per 25.4mm H | Bearing (Min) J | Depth of Socket (Min) K | Length Assem. Nom. L | Clear Assem. Nut N |
|----------------|------------------|---------------------|---------------------|-------------------|------------------|---------------------|-------------|---------------------|-----------------|-------------------------|----------------------|--------------------|
| 1/8 | 21.8 | 11.18 10.67 | 3.18 | 7.59 6.07 | 22.4 19.1 | 3.18 | 3.18 | 3.18 | 16 | 1.24 | 41.4 | 50.8 |
| 1/4 | 21.8 | 14.61 14.10 | 3.30 | 10.01 8.48 | 22.4 19.1 | 3.18 | 3.18 | 3.18 | 16 | 1.24 | 41.4 | 50.8 |
| 3/8 | 25.9 | 18.03 17.53 | 3.51 | 13.29 11.76 | 26.9 20.6 | 3.43 | 3.43 | 3.43 | 14 | 1.37 | 48.0 | 55.9 |
| 1/2 | 31.2 | 22.23 21.72 | 4.09 | 16.56 15.04 | 26.9 20.6 | 3.68 | 3.68 | 3.68 | 14 | 1.50 | 49.0 | 58.4 |
| 3/4 | 37.1 | 27.56 27.05 | 4.27 | 21.69 20.17 | 31.8 25.4 | 4.08 | 4.06 | 4.06 | 11 | 1.68 | 58.9 | 66.0 |
| 1 | 45.5 | 34.29 33.78 | 4.86 | 27.41 25.99 | 34.3 26.2 | 4.57 | 4.57 | 4.45 | 11 | 1.85 | 62.0 | 78.7 |
| 1-1/4 | 54.9 | 43.05 42.55 | 5.28 | 35.91 34.29 | 40.8 32.5 | 5.33 | 5.33 | 5.21 | 10 | 2.13 | 71.1 | 94.0 |
| 1-1/2 | 61.5 | 49.15 48.64 | 5.54 | 41.66 40.13 | 42.2 34.0 | 5.84 | 5.84 | 5.59 | 10 | 2.31 | 78.5 | 111.8 |
| 2 | 75.2 | 61.62 61.11 | 6.05 | 53.26 51.74 | 45.5 37.3 | 6.60 | 6.60 | 6.35 | 10 | 2.69 | 88.1 | 132.1 |
| 2-1/2 | 91.7 | 74.45 73.81 | 7.67 | 64.24 61.19 | 61.7 52.1 | 7.49 | 7.49 | 7.11 | 8 | 3.07 | 102.4 | 149.9 |
| 3 | 109.2 | 90.42 89.79 | 8.31 | 79.46 76.40 | 63.8 53.8 | 8.26 | 8.26 | 8.00 | 8 | 3.53 | 109.0 | 175.3 |

Dimensions are in millimeters.



SOCKET WELD END UNION

Model No. TT-724



5000 Lb

| Nom. Pipe Size | Pipe End (Min) A | Socket Bore Dia. (Min) B ¹ | Socket Wall (Min) C | Water Way Bore (Min) D ² | Laying Length (Min) E ¹ | Male Flange (Min) F | Nut (Min) G | Thrds. Per 25.4mm H | Bearing (Min) J | Depth of Socket (Min) K | Length Assem. Nom L | Clear Assem. Nut N |
|----------------|------------------|---------------------------------------|---------------------|-------------------------------------|------------------------------------|---------------------|-------------|---------------------|-----------------|-------------------------|---------------------|--------------------|
| 1/8 | 21.8 | 11.18 10.87 | 3.43 | 4.80 3.20 | 22.4 19.1 | 3.18 | 3.18 | 16 | 1.24 | 9.70 | 41.5 | 50.8 |
| 1/4 | 25.8 | 14.61 14.10 | 4.01 | 7.11 5.59 | 26.9 20.6 | 3.43 | 3.43 | 14 | 1.37 | 9.7 | 46.0 | 55.9 |
| 3/8 | 31.2 | 18.03 17.53 | 4.37 | 9.89 8.36 | 26.9 20.6 | 3.68 | 3.68 | 14 | 1.50 | 9.7 | 49.0 | 58.4 |
| 1/2 | 37.1 | 22.23 21.72 | 5.18 | 12.55 11.02 | 31.8 25.4 | 4.06 | 4.06 | 11 | 1.68 | 9.7 | 56.9 | 66.0 |
| 3/4 | 45.5 | 27.56 27.05 | 6.05 | 16.31 14.78 | 34.3 26.2 | 4.57 | 4.45 | 11 | 1.85 | 12.7 | 62.0 | 78.7 |
| 1 | 54.9 | 34.29 33.78 | 6.93 | 21.46 19.94 | 40.6 32.5 | 5.33 | 5.21 | 10 | 2.13 | 12.7 | 71.1 | 94.0 |
| 1-1/4 | 61.5 | 43.05 42.55 | 6.93 | 30.23 28.70 | 42.2 34.0 | 5.84 | 5.58 | 10 | 2.31 | 12.7 | 76.5 | 111.8 |
| 1-1/2 | 75.2 | 49.15 48.64 | 7.80 | 34.75 33.22 | 45.5 37.3 | 6.60 | 6.35 | 10 | 2.69 | 12.7 | 86.1 | 132.1 |
| 2 | 91.7 | 61.62 61.11 | 7.50 | 43.61 42.09 | 61.7 52.1 | 7.49 | 7.11 | 8 | 3.07 | 15.7 | 102.4 | 149.9 |
| 2-1/2 | 109.2 | 74.45 73.81 | 10.39 | 54.74 53.21 | 63.8 53.6 | 8.26 | 8.00 | 8 | 3.53 | 15.7 | 109.0 | 175.3 |

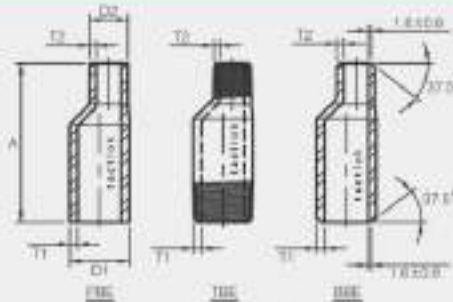
Dimensions are in millimeters.

SWAGED NIPPLE

Model No. TT-725



CONCENTRIC



ECCENTRIC



| Nom. Pipe Size | Outside Diameter | | End to End 'A' | Wall Thickness | | | | | | | |
|----------------|------------------|--------------|----------------|----------------|------------|--------|------|-------------|------------|--------|------|
| | Large End D1 | Small End D2 | | T1 | | | | T2 | | | |
| | | | | Sch40 (STD) | Sch80 (XS) | Sch160 | XXS | Sch40 (STD) | Sch80 (XS) | Sch160 | XXS |
| 1/4 X 1/8 | 13.7 | 13.7 | 57 | 2.2 | 3.0 | 3.7 | 6.1 | 6.1 | 2.4 | - | - |
| 3/8 X 1/8 | 17.1 | 17.1 | 64 | 2.3 | 3.2 | 4.0 | 6.4 | 6.4 | 2.4 | - | - |
| 3/8 X 1/4 | 17.1 | 17.1 | 64 | 2.3 | 3.2 | 4.0 | 6.4 | 6.4 | 3.0 | - | - |
| 1/2 X 1/8 | 21.3 | 21.3 | 70 | 2.8 | 3.7 | 4.8 | 7.5 | 7.5 | 2.4 | - | - |
| 1/2 X 1/4 | 21.3 | 21.3 | 70 | 2.8 | 3.7 | 4.8 | 7.5 | 7.5 | 3.0 | - | - |
| 1/2 X 3/8 | 21.3 | 21.3 | 70 | 2.8 | 3.7 | 4.8 | 7.5 | 7.5 | 3.2 | - | - |
| 3/4 X 1/8 | 26.7 | 26.7 | 76 | 2.9 | 3.9 | 5.6 | 7.8 | 7.8 | 2.4 | - | - |
| 3/4 X 1/4 | 26.7 | 26.7 | 76 | 2.9 | 3.9 | 5.6 | 7.8 | 7.8 | 3.0 | - | - |
| 3/4 X 3/8 | 26.7 | 26.7 | 76 | 2.9 | 3.9 | 5.6 | 7.8 | 7.8 | 3.2 | - | - |
| 3/4 X 1/2 | 26.7 | 26.7 | 76 | 2.9 | 3.9 | 5.6 | 7.8 | 7.8 | 3.7 | 4.8 | 7.5 |
| 1 X 1/8 | 33.4 | 33.4 | 89 | 3.4 | 4.5 | 6.4 | 9.1 | 9.1 | 2.4 | - | - |
| 1 X 1/4 | 33.4 | 33.4 | 89 | 3.4 | 4.5 | 6.4 | 9.1 | 9.1 | 3.0 | - | - |
| 1 X 3/8 | 33.4 | 33.4 | 89 | 3.4 | 4.5 | 6.4 | 9.1 | 9.1 | 3.2 | - | - |
| 1 X 1/2 | 33.4 | 33.4 | 89 | 3.4 | 4.5 | 6.4 | 9.1 | 9.1 | 3.7 | 4.8 | 7.5 |
| 1 X 3/4 | 33.4 | 33.4 | 89 | 3.4 | 4.5 | 6.4 | 9.1 | 9.1 | 3.9 | 5.6 | 7.8 |
| 1-1/4 X 1/8 | 42.2 | 42.2 | 102 | 3.6 | 4.9 | 6.4 | 9.7 | 9.7 | 2.4 | - | - |
| 1-1/4 X 1/4 | 42.2 | 42.2 | 102 | 3.6 | 4.9 | 6.4 | 9.7 | 9.7 | 3.0 | - | - |
| 1-1/4 X 3/8 | 42.2 | 42.2 | 102 | 3.6 | 4.9 | 6.4 | 9.7 | 9.7 | 3.2 | - | - |
| 1-1/4 X 1/2 | 42.2 | 42.2 | 102 | 3.6 | 4.9 | 6.4 | 9.7 | 9.7 | 3.7 | 4.8 | 7.5 |
| 1-1/4 X 3/4 | 42.2 | 42.2 | 102 | 3.6 | 4.9 | 6.4 | 9.7 | 9.7 | 3.9 | 5.6 | 7.8 |
| 1-1/4 X 1 | 42.2 | 42.2 | 102 | 3.6 | 4.9 | 6.4 | 9.7 | 9.7 | 4.5 | 6.4 | 9.1 |
| 1-1/2 X 1/8 | 48.3 | 48.3 | 114 | 3.7 | 5.1 | 7.1 | 10.2 | 10.2 | 2.4 | - | - |
| 1-1/2 X 1/4 | 48.3 | 48.3 | 114 | 3.7 | 5.1 | 7.1 | 10.2 | 10.2 | 3.0 | - | - |
| 1-1/2 X 3/8 | 48.3 | 48.3 | 114 | 3.7 | 5.1 | 7.1 | 10.2 | 10.2 | 3.2 | - | - |
| 1-1/2 X 1/2 | 48.3 | 48.3 | 114 | 3.7 | 5.1 | 7.1 | 10.2 | 10.2 | 3.7 | 4.8 | 7.5 |
| 1-1/2 X 3/4 | 48.3 | 48.3 | 114 | 3.7 | 5.1 | 7.1 | 10.2 | 10.2 | 3.9 | 5.6 | 7.8 |
| 1-1/2 X 1 | 48.3 | 48.3 | 114 | 3.7 | 5.1 | 7.1 | 10.2 | 10.2 | 4.5 | 6.4 | 9.1 |
| 1-1/2 X 1-1/4 | 48.3 | 48.3 | 114 | 3.7 | 5.1 | 7.1 | 10.2 | 10.2 | 4.9 | 6.4 | 9.7 |
| 2 X 1/8 | 60.3 | 60.3 | 165 | 3.9 | 5.5 | 8.7 | 11.1 | 11.1 | 2.4 | - | - |
| 2 X 1/4 | 60.3 | 60.3 | 165 | 3.9 | 5.5 | 8.7 | 11.1 | 11.1 | 3.0 | - | - |
| 2 X 3/8 | 60.3 | 60.3 | 165 | 3.9 | 5.5 | 8.7 | 11.1 | 11.1 | 3.2 | - | - |
| 2 X 1/2 | 60.3 | 60.3 | 165 | 3.9 | 5.5 | 8.7 | 11.1 | 11.1 | 3.7 | 4.8 | 7.5 |
| 2 X 3/4 | 60.3 | 60.3 | 165 | 3.9 | 5.5 | 8.7 | 11.1 | 11.1 | 3.9 | 5.6 | 7.8 |
| 2 X 1 | 60.3 | 60.3 | 165 | 3.9 | 5.5 | 8.7 | 11.1 | 11.1 | 4.5 | 6.4 | 9.1 |
| 2 X 1-1/4 | 60.3 | 60.3 | 165 | 3.9 | 5.5 | 8.7 | 11.1 | 11.1 | 4.9 | 6.4 | 9.7 |
| 2 X 1-1/2 | 60.3 | 60.3 | 165 | 3.9 | 5.5 | 8.7 | 11.1 | 11.1 | 5.1 | 7.1 | 10.2 |
| 2-1/2 X 1/8 | 73.0 | 73.0 | 178 | 5.2 | 7.0 | 9.5 | 14.0 | 14.0 | 2.4 | - | - |
| 2-1/2 X 1/4 | 73.0 | 73.0 | 178 | 5.2 | 7.0 | 9.5 | 14.0 | 14.0 | 3.0 | - | - |
| 2-1/2 X 3/8 | 73.0 | 73.0 | 178 | 5.2 | 7.0 | 9.5 | 14.0 | 14.0 | 3.2 | - | - |
| 2-1/2 X 1/2 | 73.0 | 73.0 | 178 | 5.2 | 7.0 | 9.5 | 14.0 | 14.0 | 3.7 | 4.8 | 7.5 |
| 2-1/2 X 3/4 | 73.0 | 73.0 | 178 | 5.2 | 7.0 | 9.5 | 14.0 | 14.0 | 3.9 | 5.6 | 7.8 |
| 2-1/2 X 1 | 73.0 | 73.0 | 178 | 5.2 | 7.0 | 9.5 | 14.0 | 14.0 | 4.5 | 6.4 | 9.1 |

Dimensions are in millimeters.



SWAGED NIPPLE

Model No. TT-725

(Continued)

| Nom. Pipe Size | Outside Diameter | | End to End "A" | Wall Thickness | | | | | | | |
|----------------|------------------|--------------|----------------|----------------|------------|--------|------|-------------|------------|--------|------|
| | Large End D1 | Small End D2 | | T1 | | | | T2 | | | |
| | | | | Sch40 (STD) | Sch80 (XS) | Sch160 | XXS | Sch40 (STD) | Sch80 (XS) | Sch160 | XXS |
| 2-1/2 x1-1/4 | 73.0 | 42.2 | 178 | 5.2 | 7.0 | 9.5 | 14.0 | 3.6 | 4.9 | 6.4 | 9.7 |
| 2-1/2 x1-1/2 | 73.0 | 48.3 | 178 | 5.2 | 7.0 | 9.5 | 14.0 | 3.7 | 5.1 | 7.1 | 10.2 |
| 2-1/2 X2 | 73.0 | 60.3 | 178 | 5.2 | 7.0 | 9.5 | 14.0 | 3.7 | 5.5 | 8.7 | 11.1 |
| 3 X1/8 | 88.9 | 10.3 | 203 | 5.5 | 7.6 | 11.1 | 15.2 | 1.7 | 2.4 | - | - |
| 3 X1/4 | 88.9 | 13.7 | 203 | 5.5 | 7.6 | 11.1 | 15.2 | 2.2 | 3.0 | - | - |
| 3 X3/8 | 88.9 | 17.1 | 203 | 5.5 | 7.6 | 11.1 | 15.2 | 2.3 | 3.2 | - | - |
| 3 X1/2 | 88.9 | 21.3 | 203 | 5.5 | 7.6 | 11.1 | 15.2 | 2.8 | 3.7 | 4.8 | 7.5 |
| 3 X3/4 | 88.9 | 26.7 | 203 | 5.5 | 7.6 | 11.1 | 15.2 | 2.9 | 3.9 | 5.6 | 7.8 |
| 3 X1 | 88.9 | 33.4 | 203 | 5.5 | 7.6 | 11.1 | 15.2 | 3.4 | 4.5 | 6.4 | 9.1 |
| 3 X1-1/4 | 88.9 | 42.2 | 203 | 5.5 | 7.6 | 11.1 | 15.2 | 3.6 | 4.9 | 6.4 | 9.7 |
| 3 X1-1/2 | 88.9 | 48.3 | 203 | 5.5 | 7.6 | 11.1 | 15.2 | 3.7 | 5.1 | 7.1 | 10.2 |
| 3 X2 | 88.9 | 60.3 | 203 | 5.5 | 7.6 | 11.1 | 15.2 | 3.9 | 5.5 | 8.7 | 11.1 |
| 3 X2-1/2 | 88.9 | 73.0 | 203 | 5.5 | 7.6 | 11.1 | 15.2 | 5.2 | 7.0 | 9.5 | 14.0 |
| 3-1/2 X1/8 | 101.6 | 10.3 | 203 | 5.7 | 8.1 | - | - | 1.7 | 2.4 | - | - |
| 3-1/2 X1/4 | 101.6 | 13.7 | 203 | 5.7 | 8.1 | - | - | 2.2 | 3.0 | - | - |
| 3-1/2 X3/8 | 101.6 | 17.1 | 203 | 5.7 | 8.1 | - | - | 2.3 | 3.2 | - | - |
| 3-1/2 X1/2 | 101.6 | 21.3 | 203 | 5.7 | 8.1 | - | - | 2.6 | 3.7 | 4.8 | 7.5 |
| 3-1/2 X3/4 | 101.6 | 26.7 | 203 | 5.7 | 8.1 | - | - | 2.9 | 3.9 | 5.6 | 7.8 |
| 3-1/2 X1 | 101.6 | 33.4 | 203 | 5.7 | 8.1 | - | - | 3.4 | 4.5 | 6.4 | 9.7 |
| 3-1/2 X1-1/4 | 101.6 | 42.2 | 203 | 5.7 | 8.1 | - | - | 3.6 | 4.9 | 6.4 | 9.7 |
| 3-1/2 X1-1/2 | 101.6 | 48.3 | 203 | 5.7 | 8.1 | - | - | 3.7 | 5.1 | 7.1 | 10.2 |
| 3-1/2 X2 | 101.6 | 60.3 | 203 | 5.7 | 8.1 | - | - | 3.9 | 5.5 | 8.7 | 11.1 |
| 3-1/2 X2-1/2 | 101.6 | 73.0 | 203 | 5.7 | 8.1 | - | - | 5.2 | 7.0 | 9.5 | 14.0 |
| 3-1/2 X3 | 101.6 | 88.9 | 203 | 5.7 | 8.1 | - | - | 5.5 | 7.6 | 11.1 | 15.2 |
| 4 X1/4 | 114.3 | 13.7 | 229 | 6.0 | 8.6 | 13.8 | 17.1 | 2.2 | 3.0 | - | - |
| 4 X3/8 | 114.3 | 17.1 | 229 | 6.0 | 8.6 | 13.5 | 17.1 | 2.3 | 3.2 | - | - |
| 4 X1/2 | 114.3 | 21.3 | 229 | 6.0 | 8.6 | 13.8 | 17.1 | 2.8 | 3.7 | 4.8 | 7.5 |
| 4 X3/4 | 114.3 | 26.7 | 229 | 6.0 | 8.6 | 13.5 | 17.1 | 2.9 | 3.9 | 5.6 | 7.8 |
| 4 X1 | 114.3 | 33.4 | 229 | 6.0 | 8.6 | 13.5 | 17.1 | 3.4 | 4.5 | 6.4 | 9.1 |
| 4 X1-1/4 | 114.3 | 42.2 | 229 | 6.0 | 8.6 | 13.5 | 17.1 | 3.6 | 4.9 | 6.4 | 9.7 |
| 4 X1-1/2 | 114.3 | 48.3 | 229 | 6.0 | 8.6 | 13.5 | 17.1 | 3.7 | 5.1 | 7.1 | 10.2 |
| 4 X2 | 114.3 | 60.3 | 229 | 6.0 | 8.6 | 13.5 | 17.1 | 3.9 | 5.5 | 8.7 | 11.1 |
| 4 X2-1/2 | 114.3 | 73.0 | 229 | 6.0 | 8.6 | 13.5 | 17.1 | 5.2 | 7.0 | 9.5 | 14.0 |
| 4 X3 | 114.3 | 88.9 | 229 | 6.0 | 8.6 | 13.5 | 17.1 | 5.5 | 7.6 | 11.1 | 15.2 |
| 4 X3-1/2 | 114.3 | 101.6 | 229 | 6.0 | 8.6 | 13.5 | 17.1 | 5.7 | 8.1 | - | - |

DIMENSIONAL TOLERANCES OF SWAGED NIPPLES

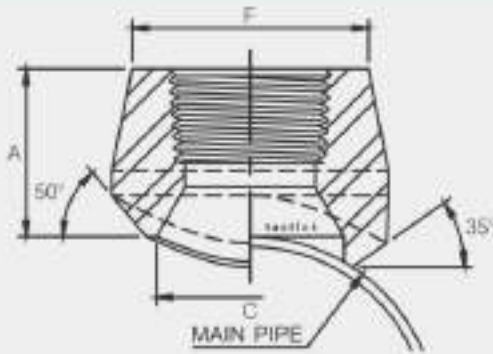
Unit : mm

| Nominal Pipe Size (Inch) | Overall Length | Outside Diameter at End | | Fitting Wall Thickness (see Note 1) |
|--------------------------|----------------|-------------------------|-----------------------|---|
| | | Square Cut Ends | Other End Connections | |
| 1/8 - 3/8 | ±1.5 | +0.4 -0.8 | ±0.8 | Not less than 87.5% of Nominal Wall Thickness |
| 1/2 - 1-1/2 | ±1.5 | +0.4 -0.8 | +0.4 -0.8 | |
| 2 - 2-1/2 | ±3.0 | ±0.8 | +1.5 -0.8 | |
| 3 - 4 | ±3.0 | ±0.8 | ±1.5 | |

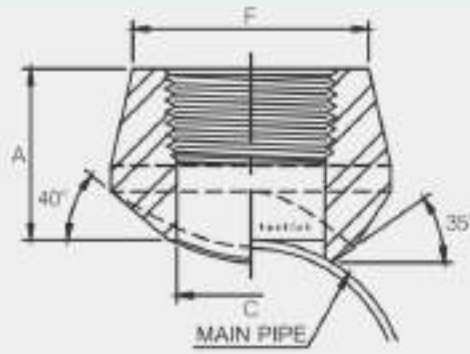
Note 1 : Prior to threading or grooving.

THREADED END 90° BRANCH OUTLET

Model No. TT-726



REDUCING WAY



STRAIGHT WAY



| Reducing way | | | |
|------------------|---|---|---|
| OutLet Pipe (in) | A | C | F |

3000Lb

| | | | |
|-------|------|-------|-------|
| 1/8 | 19.0 | 13.7 | 17.3 |
| 1/4 | 19.0 | 13.7 | 22.0 |
| 3/8 | 20.6 | 17.1 | 25.9 |
| 1/2 | 25.4 | 21.3 | 31.4 |
| 3/4 | 26.9 | 26.7 | 37.1 |
| 1 | 33.3 | 33.4 | 45.5 |
| 1-1/4 | 33.3 | 42.2 | 57.0 |
| 1-1/2 | 35.0 | 48.3 | 64.0 |
| 2 | 38.1 | 60.3 | 76.0 |
| 2-1/2 | 46.0 | 73.0 | 92.0 |
| 3 | 50.8 | 88.9 | 109.2 |
| 4 | 57.2 | 114.3 | 140.0 |

6000Lb

| | | | |
|-------|------|------|------|
| 1/2 | 31.8 | 16.6 | 33.9 |
| 3/4 | 36.8 | 21.2 | 41.2 |
| 1 | 39.6 | 27.0 | 49.9 |
| 1-1/4 | 41.1 | 35.8 | 58.6 |
| 1-1/2 | 42.3 | 41.2 | 66.7 |
| 2 | 52.3 | 51.6 | 83.2 |

| Straight way | | | |
|------------------|---|---|---|
| OutLet Pipe (in) | A | C | F |

3000Lb

| | | | |
|-------|------|-------|-------|
| 1/4 | 19.0 | 11.5 | 22.0 |
| 3/8 | 20.6 | 14.5 | 25.9 |
| 1/2 | 25.4 | 16.5 | 31.4 |
| 3/4 | 26.9 | 21.5 | 37.1 |
| 1 | 33.3 | 27.2 | 45.5 |
| 1-1/4 | 33.3 | 36.0 | 57.0 |
| 1-1/2 | 35.0 | 42.0 | 64.0 |
| 2 | 38.1 | 53.0 | 76.0 |
| 2-1/2 | 46.0 | 65.0 | 92.0 |
| 3 | 50.8 | 80.0 | 109.2 |
| 4 | 57.2 | 104.0 | 140.0 |

DIMENSIONAL TOLERANCE

Unit : mm

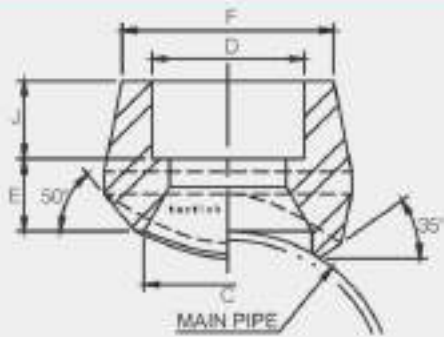
| Item | 1/8"–3/4" | 1"–4" |
|-------------------------------|-----------|-------|
| Face of fitting to crotch (A) | ± 0.8 | ± 1.6 |

Dimensions are in millimeters.

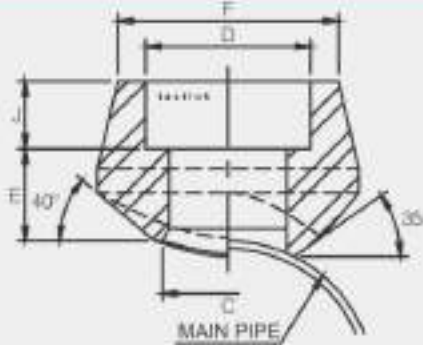


SOCKET WELDING END 90° BRANCH OUTLET

Model No. TT-727



REDUCING WAY



STRAIGHT WAY



| Reducing way | | | | | |
|------------------|---|---|---|---------|---------|
| OutLet Pipe (in) | C | D | F | J (Min) | E (Max) |

3000Lb

| | | | | | |
|-------|-------|-------|-------|------|------|
| 1/8 | 13.7 | 10.8 | 22.0 | 9.5 | 11.0 |
| 1/4 | 13.7 | 14.2 | 22.0 | 9.5 | 11.0 |
| 3/8 | 19.1 | 17.6 | 25.9 | 9.5 | 13.0 |
| 1/2 | 21.3 | 21.8 | 31.4 | 9.5 | 16.0 |
| 3/4 | 26.7 | 27.2 | 37.1 | 12.5 | 16.0 |
| 1 | 33.4 | 33.9 | 45.5 | 12.5 | 23.0 |
| 1-1/4 | 42.2 | 42.7 | 57.0 | 12.5 | 23.0 |
| 1-1/2 | 48.3 | 48.8 | 64.0 | 12.5 | 24.0 |
| 2 | 60.3 | 61.2 | 76.0 | 16.0 | 24.0 |
| 2-1/2 | 73.2 | 73.9 | 92.0 | 16.0 | 26.0 |
| 3 | 88.9 | 89.8 | 109.2 | 16.0 | 31.0 |
| 4 | 114.3 | 115.2 | 140.0 | 19.0 | 31.0 |

6000Lb

| | | | | | |
|-------|------|------|------|------|------|
| 1/2 | 18.6 | 21.8 | 38.0 | 9.5 | 24.0 |
| 3/4 | 21.2 | 27.2 | 44.0 | 12.5 | 26.0 |
| 1 | 27.0 | 33.9 | 57.0 | 12.5 | 29.0 |
| 1-1/4 | 35.8 | 42.7 | 64.0 | 12.5 | 31.0 |
| 1-1/2 | 41.2 | 48.8 | 76.0 | 12.5 | 32.0 |
| 2 | 51.6 | 61.2 | 92.0 | 16.0 | 37.0 |

| Straight way | | | | | |
|------------------|---|---|---|---------|---------|
| OutLet Pipe (in) | C | D | F | J (Min) | E (Max) |

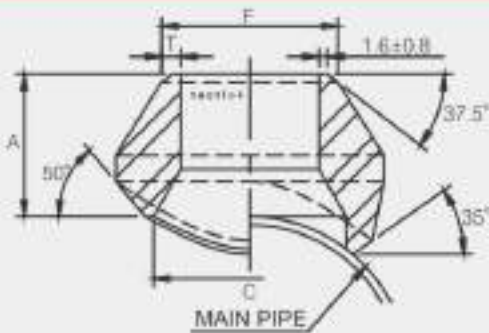
3000Lb

| | | | | | |
|-------|-------|-------|-------|------|------|
| 1/4 | 11.5 | 14.2 | 22.0 | 9.5 | 11.0 |
| 3/8 | 14.5 | 17.6 | 25.9 | 9.5 | 13.0 |
| 1/2 | 16.5 | 21.8 | 31.4 | 9.5 | 16.0 |
| 3/4 | 21.5 | 27.2 | 37.1 | 12.5 | 16.0 |
| 1 | 27.2 | 33.9 | 45.5 | 12.5 | 23.0 |
| 1-1/4 | 36.0 | 42.7 | 57.0 | 12.5 | 23.0 |
| 1-1/2 | 42.0 | 48.8 | 64.0 | 12.5 | 24.0 |
| 2 | 53.0 | 61.2 | 76.0 | 16.0 | 24.0 |
| 2-1/2 | 65.0 | 73.9 | 92.0 | 16.0 | 26.0 |
| 3 | 80.0 | 89.8 | 109.2 | 16.0 | 31.0 |
| 4 | 104.0 | 115.2 | 140.0 | 19.0 | 31.0 |

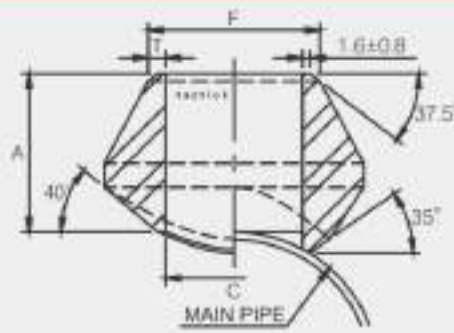
Dimensions are in millimeters.

BUTT WELDING END 90° BRANCH OUTLET

Model No. TT-728



REDUCING WAY



STRAIGHT WAY

STANDARD



| Reducing Way | | | | |
|------------------|-------|-------|-------|------|
| OutLet Pipe (in) | A | C | F | T |
| 1/8 | 15.7 | 13.7 | 10.3 | 1.73 |
| 1/4 | 15.7 | 13.7 | 13.7 | 2.24 |
| 3/8 | 18.1 | 17.1 | 17.1 | 2.31 |
| 1/2 | 19.1 | 21.3 | 21.3 | 2.77 |
| 3/4 | 22.4 | 26.7 | 26.7 | 2.87 |
| 1 | 26.9 | 33.4 | 33.4 | 3.38 |
| 1-1/4 | 31.8 | 42.2 | 42.2 | 3.56 |
| 1-1/2 | 33.3 | 48.3 | 48.3 | 3.68 |
| 2 | 38.1 | 60.3 | 60.3 | 3.91 |
| 2-1/2 | 41.1 | 73.0 | 73.0 | 5.16 |
| 3 | 44.4 | 88.9 | 88.9 | 5.49 |
| 3-1/2 | 47.8 | 101.6 | 101.6 | 5.74 |
| 4 | 50.8 | 114.3 | 114.3 | 6.02 |
| 5 | 57.2 | 141.3 | 141.3 | 6.55 |
| 6 | 60.4 | 168.3 | 168.3 | 7.11 |
| 8 | 69.8 | 219.3 | 219.3 | 8.11 |
| 10 | 77.7 | 273.1 | 273.1 | 9.27 |
| 12 | 85.9 | 323.9 | 323.9 | 9.53 |
| 14 | 88.9 | 355.6 | 355.6 | 9.53 |
| 16 | 93.7 | 406.4 | 406.4 | 9.53 |
| 18 | 96.8 | 457.2 | 457 | 9.53 |
| 20 | 101.6 | 508.0 | 508.0 | 9.53 |
| 24 | 115.8 | 609.6 | 609.6 | 9.53 |

| Straight Way | | | | |
|------------------|------|-------|-------|------|
| OutLet Pipe (in) | A | C | F | T |
| 1/4 | 15.7 | 11.5 | 13.7 | 2.24 |
| 3/8 | 18.1 | 14.5 | 17.1 | 2.31 |
| 1/2 | 19.1 | 16.5 | 21.3 | 2.77 |
| 3/4 | 22.4 | 21.5 | 26.7 | 2.87 |
| 1 | 26.9 | 27.2 | 33.4 | 3.38 |
| 1-1/4 | 31.8 | 36.0 | 42.2 | 3.56 |
| 1-1/2 | 33.3 | 42.0 | 48.3 | 3.68 |
| 2 | 38.1 | 53.0 | 60.3 | 3.91 |
| 2-1/2 | 41.1 | 65.0 | 73.0 | 5.16 |
| 3 | 44.4 | 80.0 | 88.9 | 5.49 |
| 4 | 50.8 | 104.0 | 114.3 | 6.02 |

DIMENSIONAL TOLERANCE

Unit : mm

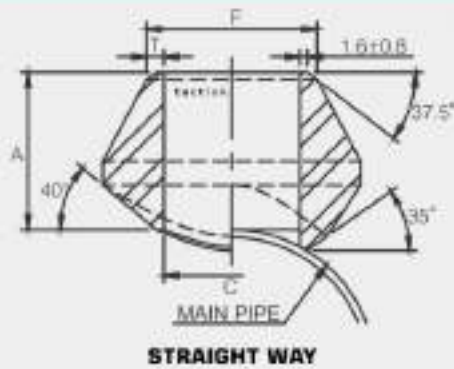
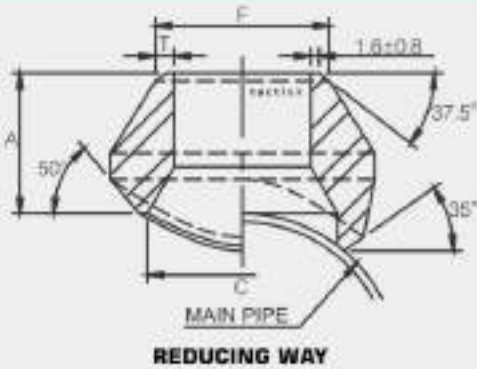
| Item | 1/8"–3/4" | 1"–4" | 5"–12" | 14"–24" |
|-------------------------------|-----------|-------|--------|---------|
| Face of fitting to crutch (A) | ±0.8 | ±1.6 | ±3.2 | ±4.8 |

Dimensions are in millimeters.



BUTT WELDING END 90° BRANCH OUTLET

Model No. TT-729



EXTRA STRONG

| Reducing Way | | | | |
|------------------|-------|-------|-------|-------|
| OutLet Pipe (in) | A | C | F | T |
| 1/8 | 15.7 | 13.7 | 10.3 | 2.41 |
| 1/4 | 15.7 | 13.7 | 13.7 | 3.02 |
| 3/8 | 19.1 | 17.1 | 17.1 | 3.20 |
| 1/2 | 19.1 | 21.3 | 21.3 | 3.73 |
| 3/4 | 22.4 | 26.7 | 26.7 | 3.91 |
| 1 | 26.9 | 33.4 | 33.4 | 4.55 |
| 1-1/4 | 31.8 | 42.2 | 42.2 | 4.85 |
| 1-1/2 | 33.3 | 48.3 | 48.3 | 5.08 |
| 2 | 38.1 | 60.3 | 60.3 | 5.54 |
| 2-1/2 | 41.1 | 73.0 | 73.0 | 7.01 |
| 3 | 44.4 | 88.9 | 88.9 | 7.62 |
| 3-1/2 | 47.8 | 101.6 | 101.6 | 8.56 |
| 4 | 50.8 | 114.3 | 114.3 | 8.56 |
| 5 | 57.2 | 141.3 | 141.3 | 9.53 |
| 6 | 77.7 | 168.3 | 168.3 | 10.97 |
| 8 | 98.6 | 219.3 | 219.3 | 12.70 |
| 10 | 93.7 | 273.1 | 273.1 | 12.70 |
| 12 | 103.1 | 323.9 | 323.9 | 12.70 |
| 14 | 100.1 | 355.6 | 355.6 | 12.70 |
| 16 | 106.2 | 406.4 | 406.4 | 12.70 |
| 18 | 111.2 | 457.2 | 457.2 | 12.70 |
| 20 | 119.1 | 508.0 | 508.0 | 12.70 |
| 24 | 139.7 | 609.6 | 609.6 | 12.70 |

Dimensions are in millimeters.

| Straight Way | | | | |
|------------------|------|-------|-------|------|
| OutLet Pipe (in) | A | C | F | T |
| 1/4 | 15.7 | 11.5 | 13.7 | 3.02 |
| 3/8 | 19.1 | 14.5 | 17.1 | 3.20 |
| 1/2 | 19.1 | 16.5 | 21.3 | 3.73 |
| 3/4 | 22.4 | 21.5 | 26.7 | 3.91 |
| 1 | 26.9 | 27.2 | 33.4 | 4.55 |
| 1-1/4 | 31.8 | 36.0 | 42.2 | 4.85 |
| 1-1/2 | 33.3 | 42.0 | 48.3 | 5.08 |
| 2 | 38.1 | 53.0 | 60.3 | 5.54 |
| 2-1/2 | 41.1 | 65.0 | 73.0 | 7.01 |
| 3 | 44.4 | 80.0 | 88.9 | 7.62 |
| 4 | 50.8 | 104.0 | 114.3 | 8.56 |

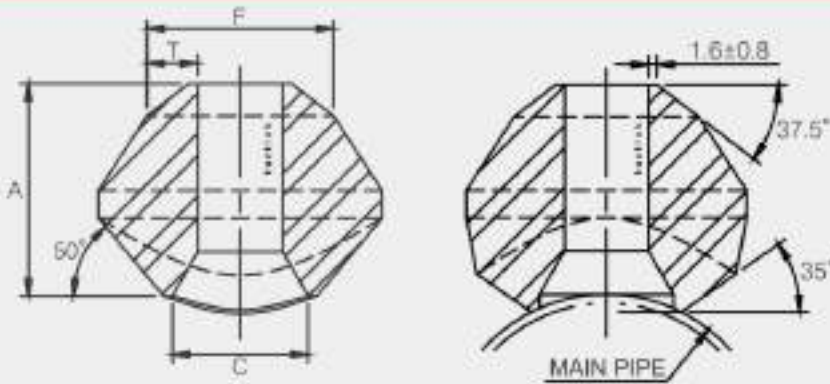
DIMENSIONAL TOLERANCE

Unit : mm

| Item | 1/8" - 3/4" | 1" - 4" | 5" - 12" | 14" - 24" |
|-------------------------------|-------------|---------|----------|-----------|
| Face of fitting to crotch (A) | ±0.8 | ±1.6 | ±3.2 | ±4.8 |

BUTT WELDING END 90° BRANCH OUTLET

Model No. TT-730



SCHEDULE 160 & DOUBLE EXTRA STRONG

| Outlet Pipe (in) | Reducing Way | | | | |
|------------------|--------------|-------|-------|-------|-------|
| | A | C | F | T | |
| | | | | S160 | XXS |
| 1/2 | 28.4 | 13.8 | 21.3 | 4.78 | 7.47 |
| 3/4 | 31.8 | 18.9 | 26.7 | 5.56 | 7.82 |
| 1 | 38.1 | 24.3 | 33.4 | 6.35 | 9.09 |
| 1-1/4 | 44.4 | 32.5 | 42.2 | 6.35 | 9.70 |
| 1-1/2 | 50.8 | 38.1 | 48.3 | 7.14 | 10.15 |
| 2 | 55.4 | 49.2 | 60.3 | 8.74 | 11.07 |
| 2-1/2 | 62.0 | 59.0 | 73.0 | 9.53 | 14.02 |
| 3 | 73.2 | 73.7 | 88.9 | 11.13 | 15.24 |
| 4 | 84.1 | 87.2 | 114.3 | 13.49 | 17.12 |
| 5 | 93.7 | 122.2 | 141.3 | 15.88 | 19.05 |
| 6 | 104.6 | 146.4 | 168.3 | 18.26 | 21.95 |

CONVENTIONAL RUN PIPE SIZE COMBINATIONS

3000Lb THREAD/SOCKET-WELD END STD/XXS BUTT WELDING END

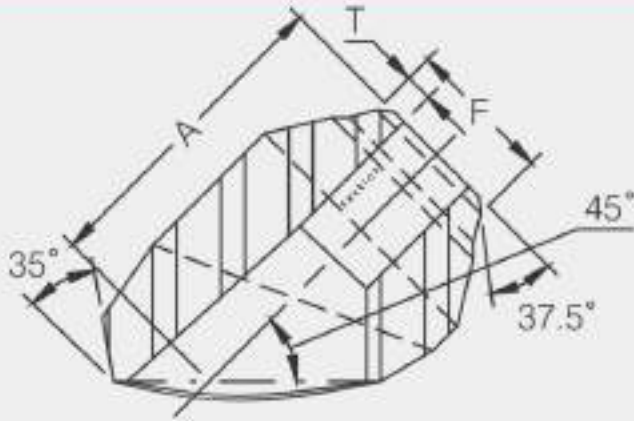
| RUN SIZE (MAIN PIPE) | OUTLET SIZE | | | | | | | | | | | |
|----------------------|--------------|----------------------|----------------------------------|--|---|---|--|---|--|---|--|--|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 4" | |
| | Reducing way | 3/8"-3/4" 1"-3/8" | 1/2" 3/4"-1/4" 1-1/2"-3/8" | 3/4" 1" 1-1/4" 1-1/2"-3" 3-1/2"-3/8" | 1" 1-1/4" 1-1/2" 2"-3" 3-1/2"-6" 8"-3/8" | 1-1/4" 1-1/2" 2" 2-1/2" 3"-4" 5"-10" 12"-3/8" | 1-1/2" 2" 2-1/2" 3" 3-1/2"-5" 6"-8" 10"-3/8" | 2" 2-1/2" 3" 3-1/2" 4"-5" 6"-10" 12"-3/8" | 2-1/2" 3" 3-1/2" 4" 5"-6" 8"-10" 12"-18" | 3" 3-1/2" 4" 5" 6" 8" 10"-14" 16"-3/8" | 3-1/2" 4" 5" 6" 8" 10" 12"-16" 18"-3/8" | 4" 5" 6" 8" 10" 12"-16" 20"-3/8" |
| Straight way | 3/8"-3/8" | 1/2"-3/8" | 3/4"-3/8" | 1"-3/8" | 1-1/4"-1-1/2" 2"-3/8" | 1-1/2" 2"-3" 3-1/2"-3/8" | 2" 2-1/2"-4" 5"-3/8" | 2-1/2" 3"-3-1/2" 4"-8" 8"-3/8" | 3" 3-1/2"-4" 5"-8" 10"-3/8" | 3-1/2" 4" 5" 6" 8"-12" 14"-3/8" | 4" 6" 8" 10" 12"-16" 18"-3/8" | 5" 6" 8" 10" 12"-16" 18"-3/8" |

Each charted outlet size is designed to fit a number of run pipe sizes.
Dimensions are in millimeters.



BUTT WELDING END 45° BRANCH OUTLET

Model No. TT-731



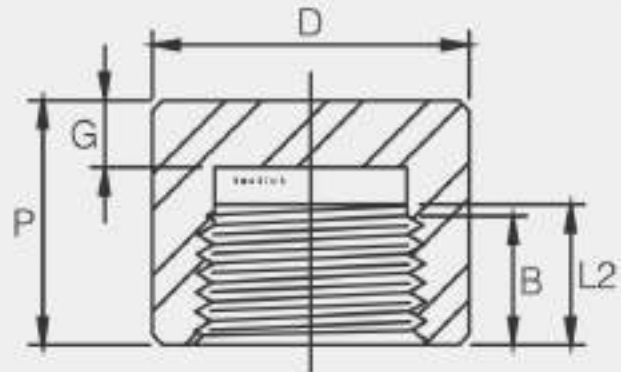
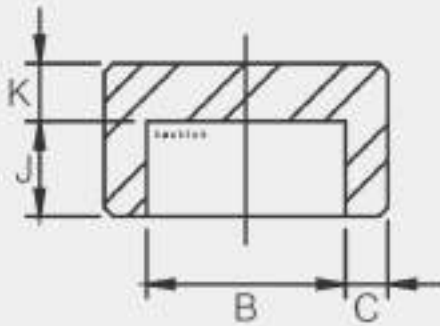
STANDARD WEIGHT & EXTRA STRONG

| 45° Branch Outlet | | | | | | |
|-------------------|-------|------|------|-------------|-----------|------|
| Outlet Pipe | | A | | T | | F |
| DN | IN | Min | Max | Sch 40/ STD | Sch 80/XS | |
| 8 | 1/4 | 38.1 | 42.9 | 2.24 | 3.02 | 13.7 |
| 10 | 3/8 | 38.1 | 42.9 | 2.31 | 3.20 | 17.1 |
| 15 | 1/2 | 38.1 | 42.9 | 2.77 | 3.73 | 21.3 |
| 20 | 3/4 | 44.5 | 50.8 | 2.87 | 3.91 | 26.7 |
| 25 | 1 | 54.0 | 65.1 | 3.38 | 4.55 | 33.4 |
| 32 | 1-1/4 | 54.0 | 65.1 | 3.56 | 4.85 | 42.2 |
| 40 | 1-1/2 | 63.5 | 69.9 | 3.68 | 5.08 | 48.3 |
| 50 | 2 | 73.0 | 88.9 | 3.91 | 5.54 | 60.3 |

Dimensions are in millimeters.

CAP

Model No. TT-732



| Socket Welding | | | | | | |
|----------------|----------------|----------------|----------------|-------|---------|---------|
| DN | Nom. Pipe Size | B ¹ | C ² | | K (Min) | J (Min) |
| | | | (Avg) | (Min) | | |

3000Lb

| | | | | | | |
|-----|-------|-------|-------|------|------|------|
| 6 | 1/8 | 10.8 | 3.18 | 3.18 | 4.8 | 9.5 |
| 8 | 1/4 | 14.2 | 3.78 | 3.30 | 4.8 | 9.5 |
| 10 | 3/8 | 17.6 | 4.01 | 3.50 | 4.8 | 9.5 |
| 15 | 1/2 | 21.8 | 4.67 | 4.09 | 6.4 | 9.5 |
| 20 | 3/4 | 27.2 | 4.90 | 4.27 | 6.4 | 12.5 |
| 25 | 1 | 33.9 | 5.69 | 4.98 | 9.8 | 12.5 |
| 32 | 1-1/4 | 42.7 | 6.07 | 5.28 | 9.8 | 12.5 |
| 40 | 1-1/2 | 48.8 | 6.35 | 5.54 | 11.2 | 12.5 |
| 50 | 2 | 61.2 | 6.93 | 6.04 | 12.7 | 16.0 |
| 65 | 2-1/2 | 73.9 | 8.76 | 7.67 | 15.7 | 16.0 |
| 80 | 3 | 89.8 | 9.52 | 8.30 | 19.0 | 16.0 |
| 100 | 4 | 115.2 | 10.69 | 9.35 | 22.4 | 19.0 |

6000Lb

| | | | | | | |
|----|-------|------|-------|------|------|------|
| 6 | 1/8 | 10.8 | 3.96 | 3.43 | 6.4 | 9.5 |
| 8 | 1/4 | 14.2 | 4.60 | 4.01 | 6.4 | 9.5 |
| 10 | 3/8 | 17.6 | 5.03 | 4.37 | 6.4 | 9.5 |
| 15 | 1/2 | 21.8 | 5.97 | 5.18 | 7.9 | 9.5 |
| 20 | 3/4 | 27.2 | 6.96 | 6.04 | 7.9 | 12.5 |
| 25 | 1 | 33.9 | 7.92 | 6.93 | 11.2 | 12.5 |
| 32 | 1-1/4 | 42.7 | 7.92 | 6.93 | 11.2 | 12.5 |
| 40 | 1-1/2 | 48.8 | 8.92 | 7.80 | 12.7 | 12.5 |
| 50 | 2 | 61.2 | 10.92 | 9.50 | 15.7 | 16.0 |

9000Lb

| | | | | | | |
|----|-------|------|-------|-------|------|------|
| 15 | 1/2 | 21.8 | 9.35 | 8.18 | 11.2 | 9.5 |
| 20 | 3/4 | 27.2 | 9.78 | 8.58 | 12.7 | 12.5 |
| 25 | 1 | 33.9 | 11.38 | 9.96 | 14.2 | 12.5 |
| 32 | 1-1/4 | 42.7 | 12.14 | 10.62 | 14.2 | 12.5 |
| 40 | 1-1/2 | 48.8 | 12.70 | 11.12 | 15.7 | 12.5 |
| 50 | 2 | 61.2 | 13.84 | 12.12 | 19.0 | 16.0 |

Dimensions are in millimeters.

| Threaded | | | | | | |
|----------|----------------|------------------------|-----------------|---|---|---------|
| DN | Nom. Pipe Size | Length of Thread (Min) | | P | D | G (Min) |
| | | B ¹ | L2 ¹ | | | |

3000Lb

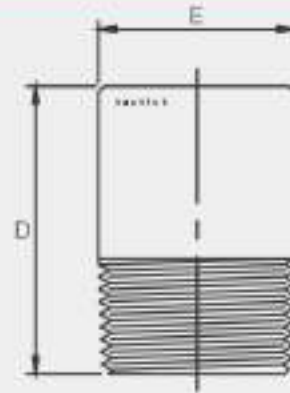
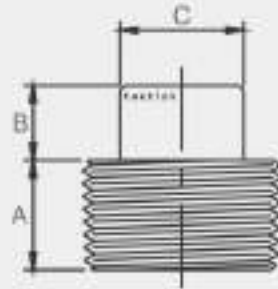
| | | | | | | |
|-----|-------|------|------|----|-----|------|
| 6 | 1/8 | 6.4 | 6.7 | 19 | 16 | 4.8 |
| 8 | 1/4 | 8.1 | 10.2 | 25 | 19 | 4.8 |
| 10 | 3/8 | 9.1 | 10.4 | 25 | 22 | 4.8 |
| 15 | 1/2 | 10.9 | 13.6 | 32 | 28 | 6.4 |
| 20 | 3/4 | 12.7 | 13.9 | 37 | 35 | 6.4 |
| 25 | 1 | 14.7 | 17.3 | 41 | 44 | 9.7 |
| 32 | 1-1/4 | 17.0 | 18.0 | 44 | 57 | 9.7 |
| 40 | 1-1/2 | 17.8 | 18.4 | 44 | 64 | 11.2 |
| 50 | 2 | 19.0 | 19.2 | 48 | 76 | 12.7 |
| 65 | 2-1/2 | 23.6 | 28.9 | 60 | 92 | 15.7 |
| 80 | 3 | 25.9 | 30.5 | 65 | 108 | 19.0 |
| 100 | 4 | 27.7 | 33.0 | 68 | 140 | 22.4 |

6000Lb

| | | | | | | |
|-----|-------|------|------|----|-----|------|
| 6 | 1/8 | 6.4 | 6.7 | 22 | 22 | 6.4 |
| 8 | 1/4 | 8.1 | 10.2 | 27 | 25 | 6.4 |
| 10 | 3/8 | 9.1 | 10.4 | 27 | 32 | 6.4 |
| 15 | 1/2 | 10.9 | 13.6 | 33 | 38 | 7.9 |
| 20 | 3/4 | 12.7 | 13.9 | 38 | 44 | 7.9 |
| 25 | 1 | 14.7 | 17.3 | 43 | 57 | 11.2 |
| 32 | 1-1/4 | 17.0 | 18.0 | 46 | 64 | 11.2 |
| 40 | 1-1/2 | 17.8 | 18.4 | 48 | 76 | 12.7 |
| 50 | 2 | 19.0 | 19.2 | 51 | 92 | 15.7 |
| 65 | 2-1/2 | 23.6 | 28.9 | 64 | 108 | 19.0 |
| 80 | 3 | 25.9 | 30.5 | 68 | 127 | 22.4 |
| 100 | 4 | 27.7 | 33.0 | 75 | 159 | 28.4 |

SQUARE HEAD & ROUND HEAD PLUG

Model No.TT-733



| Square Head Plug | | | | |
|------------------|----------------|---------|---------|---------|
| DN | Nom. Pipe Size | A (Min) | B (Min) | C (Min) |
| 6 | 1/8 | 10 | 6 | 7.15 |
| 8 | 1/4 | 11 | 6 | 9.55 |
| 10 | 3/8 | 13 | 8 | 11.11 |
| 15 | 1/2 | 14 | 10 | 14.29 |
| 20 | 3/4 | 16 | 11 | 15.88 |
| 25 | 1 | 19 | 13 | 20.64 |
| 32 | 1-1/4 | 21 | 14 | 23.81 |
| 40 | 1-1/2 | 21 | 16 | 28.58 |
| 50 | 2 | 22 | 18 | 33.27 |
| 65 | 2-1/2 | 27 | 19 | 38.10 |
| 80 | 3 | 28 | 21 | 42.86 |
| 100 | 4 | 32 | 25 | 63.50 |

| Round Head Plug | | | |
|-----------------|----------------|----------|----------|
| DN | Nom. Pipe Size | E (Nom.) | D (Nom.) |
| 6 | 1/8 | 10 | 35 |
| 8 | 1/4 | 14 | 41 |
| 10 | 3/8 | 18 | 41 |
| 15 | 1/2 | 21 | 44 |
| 20 | 3/4 | 27 | 44 |
| 25 | 1 | 33 | 51 |
| 32 | 1-1/4 | 43 | 51 |
| 40 | 1-1/2 | 48 | 51 |
| 50 | 2 | 60 | 64 |
| 65 | 2-1/2 | 73 | 70 |
| 80 | 3 | 89 | 70 |
| 100 | 4 | 114 | 76 |

DIMENSIONAL TOLERANCE

| Item | Type of pipe fitting | Size | | | | | |
|---------------------------------------|----------------------------|--------------------------|------------|------------|----------|------------|--|
| | | DN | 6 to 8 | 10 to 20 | 25 to 50 | 65 to 100 | |
| | | NPS | 1/8 to 1/4 | 3/8 to 3/4 | 1 to 2 | 2-1/2 to 4 | |
| Bore diameter of socket (B) | All types of pipe fittings | +0.4 | +0.4 | +0.4 | +0.5 | | |
| Bore Diameter of fitting (D) | | -0.0 | -0.0 | -0.0 | -0.0 | | |
| Concentricity of bore (X) | | ±0.6 | | | | | |
| Coincidence of axes (Y) | | 1/200 Max | | | | | |
| Center to bottom of socket (A) | | 45° 90° Elbow Tee, Cross | ±1.0 | ±1.5 | ±2.0 | ±2.5 | |
| Bottom to bottom of socket (E) | | Full Coupling | ±1.5 | ±3.0 | ±4.0 | ±5.0 | |
| Bottom to socket to opposite face (F) | Half Coupling | ±1.0 | ±1.5 | ±2.0 | ±2.5 | | |

Dimensions are in millimeters.

DIMENSIONS OF SEAMLESS STEEL PIPE AND SEAMLESS STAINLESS STEEL PIPE

| TOLERANCES | | | STEEL PIPE | | | | | | | | | | | | | STAINLESS STEEL PIPE | | | | | | | | |
|---------------------|----------------|------------------|------------|--------------|-------|-------|--|-------|-------|-------|------|-------|-------|-------|-------|----------------------|-------|-------|-------|-------|-----|-----|------|------|
| A53 A106 O.D. | API 5L O.D. | A530 O.D. | NPS IN | Outside Dia. | | | SCHEDULE NUMBERS(S) AND WALL THICKNESS | | | | | | | | | | | | | 56 | 105 | 405 | 805 | |
| | | | | STD | MAX | MIN | 10 | 20 | 30 | 40 | STD | 60 | XS | 80 | 100 | 120 | 140 | 160 | XXS | | | | | |
| | | | 1/8 | | 10.7 | 9.9 | 1.24 | - | 1.45 | 1.73 | 1.73 | - | 2.41 | 2.41 | - | - | - | 3.15 | 4.83 | 1.7 | 1.2 | 1.7 | 2.4 | |
| | | | 1/4 | | 14.1 | 13.3 | 1.65 | - | 1.65 | 2.24 | 2.24 | - | 3.02 | 3.02 | - | - | - | 3.68 | 6.05 | 1.7 | 1.7 | 2.2 | 3.0 | |
| | | | 3/8 | | 17.5 | 16.7 | 1.65 | - | 1.65 | 2.31 | 2.31 | - | 3.02 | 3.20 | - | - | - | 4.01 | 6.40 | 1.7 | 1.7 | 2.3 | 3.2 | |
| | | +1/64" -1/32" | 1/2 | | 21.7 | 20.9 | 2.11 | - | 2.41 | 2.77 | 2.77 | - | 3.73 | 3.73 | - | - | - | 4.78 | 7.47 | 1.7 | 2.1 | 2.8 | 3.7 | |
| | | | 3/4 | | 27.1 | 26.3 | 2.11 | - | 2.41 | 2.87 | 2.87 | - | 3.91 | 3.91 | - | - | - | 5.58 | 7.82 | 1.7 | 2.1 | 2.8 | 3.9 | |
| | | | 1 | | 33.8 | 33.0 | 2.77 | - | 2.97 | 3.38 | 3.38 | - | 4.55 | 4.55 | - | - | - | 6.35 | 9.08 | 1.7 | 2.8 | 3.4 | 4.6 | |
| | | | 1-1/4 | | 42.5 | 41.8 | 2.77 | - | 2.97 | 3.56 | 3.56 | - | 4.85 | 4.85 | - | - | - | 6.35 | 9.70 | 1.7 | 2.8 | 3.6 | 4.9 | |
| | | | 1-1/2 | | 48.7 | 47.9 | 2.77 | - | 3.18 | 3.68 | 3.68 | - | 5.08 | 5.08 | - | - | - | 7.14 | 10.15 | 1.7 | 2.8 | 3.7 | 5.1 | |
| | | | 2 | | 60.9 | 59.7 | 2.77 | - | 3.18 | 3.81 | 3.91 | - | 5.54 | 5.54 | - | - | - | 8 | 11.07 | 1.7 | 2.8 | 3.9 | 5.5 | |
| | | | 2-1/2 | | 73.7 | 72.2 | 3.05 | - | 4.78 | 5.16 | 5.16 | - | 7.01 | 7.01 | - | - | - | 7.4 | 14.02 | 2.1 | 3.1 | 5.2 | 7.0 | |
| | | | 3 | | 85.8 | 85.0 | 3.05 | - | 4.78 | 5.49 | 5.49 | - | 7.62 | 7.62 | - | - | - | 11.13 | 15.24 | 2.1 | 3.1 | 5.5 | 7.6 | |
| | | | 3-1/2 | | 102.6 | 100.6 | 3.05 | - | 4.78 | 5.74 | 5.74 | - | 8.08 | 8.08 | - | - | - | - | - | - | 2.1 | 3.1 | 5.7 | 8.1 |
| | | | 4 | | 115.4 | 113.2 | 3.05 | - | 4.78 | 6.02 | 6.02 | - | 8.56 | 8.56 | - | 11.13 | - | 13.48 | 17.12 | 2.1 | 3.1 | 6.0 | 8.6 | |
| | | | 5 | | 142.7 | 139.9 | 3.40 | - | - | 6.55 | 6.55 | - | 9.53 | 9.53 | - | 12.73 | - | 15.88 | 19.05 | 2.8 | 3.4 | 6.6 | 9.5 | |
| | | | 6 | | 170.0 | 166.6 | 3.40 | - | - | 7.11 | 7.11 | - | 10.97 | 10.97 | - | 14.27 | - | 18.26 | 21.95 | 2.8 | 3.4 | 7.1 | 11.0 | |
| | | | 8 | | 221.3 | 216.9 | 3.76 | 6.35 | 7.04 | 8.18 | 8.18 | 10.31 | 12.70 | 12.70 | 15.09 | 16.26 | 18.26 | 20.62 | 23.01 | 22.23 | 2.8 | 3.8 | 6.2 | 12.7 |
| | | | 10 | | 275.8 | 270.4 | 4.19 | 6.35 | 7.60 | 9.27 | 9.27 | 12.70 | 12.70 | 15.09 | 16.26 | 21.44 | 25.40 | 28.58 | 33.32 | 25.40 | 3.4 | 4.2 | 9.3 | 12.7 |
| | | | 12 | | 327.1 | 320.7 | 4.57 | 6.35 | 8.38 | 10.31 | 9.53 | 14.27 | 12.70 | 17.48 | 21.44 | 25.40 | 28.58 | 33.32 | 25.40 | 4.0 | 4.8 | 9.5 | 12.7 | |
| | | | 14 | | 359.2 | 352.0 | 6.35 | 7.92 | 9.53 | 11.13 | 9.53 | 15.09 | 12.70 | 19.05 | 23.63 | 27.79 | 31.75 | 35.71 | - | - | 4.0 | 4.8 | 9.5 | 12.7 |
| | | | 16 | | 410.5 | 402.3 | 6.35 | 7.92 | 9.53 | 12.70 | 9.53 | 16.66 | 12.70 | 21.44 | 26.19 | 30.96 | 36.53 | 40.49 | - | - | 4.2 | 4.8 | 9.5 | 12.7 |
| | | | 18 | | 461.8 | 452.6 | 6.35 | 7.92 | 11.13 | 14.27 | 9.53 | 19.09 | 12.70 | 23.83 | 29.36 | 34.93 | 39.67 | 45.24 | - | - | 4.2 | 4.8 | 9.5 | 12.7 |
| | | | 20 | | 513.1 | 502.9 | 6.35 | 9.53 | 12.70 | 15.09 | 9.53 | 20.62 | 12.70 | 26.19 | 32.54 | 38.10 | 44.45 | 50.01 | - | - | 4.8 | 5.5 | 9.5 | 12.7 |
| | | | 22 | | - | - | 6.35 | 9.53 | 12.70 | - | 9.53 | 22.23 | 12.70 | 28.58 | 34.93 | 41.28 | 47.63 | 53.98 | - | - | 4.8 | 5.5 | - | - |
| | | | 24 | | 615.7 | 603.5 | 6.35 | 9.53 | 14.27 | 17.48 | 9.53 | 24.61 | 12.70 | 30.96 | 38.89 | 46.02 | 52.37 | 59.54 | - | - | 5.5 | 6.4 | 9.5 | 12.7 |
| | | | 26 | | - | - | 7.92 | 12.70 | - | - | 9.53 | - | 12.70 | - | - | - | - | - | - | - | - | - | - | - |
| | | +0.15% -0.25% | 28 | | - | - | 7.92 | 12.70 | 15.88 | - | 9.53 | - | 12.70 | - | - | - | - | - | - | - | - | - | - | - |
| | | | 30 | | - | - | 7.92 | 12.70 | 15.88 | - | 9.53 | - | 12.70 | - | - | - | - | - | - | - | 6.4 | 7.9 | - | - |
| | | | 32 | | - | - | 7.92 | 12.70 | 15.88 | 17.48 | 9.53 | - | 12.70 | - | - | - | - | - | - | - | - | - | - | - |
| | | | 34 | | - | - | 7.92 | 12.70 | 15.88 | 17.48 | 9.53 | - | 12.70 | - | - | - | - | - | - | - | - | - | - | - |
| | | | 36 | | - | - | 7.92 | 12.70 | 15.88 | 19.05 | 9.53 | - | 12.70 | - | - | - | - | - | - | - | - | - | - | - |

Dimensions are in millimeters.





WEIGHT LIST

Unit : KG

| SIZE NPS | 90° Elbow | | | | | 45° Elbow | | | | | Tees | | | | |
|-------------|-----------|----------|-----------|----------|-----------|-----------|----------|-----------|----------|-----------|-----------|----------|-----------|----------|-----------|
| | 2M NPT | 3M SW | 3M NPT | 6M SW | 6M NPT | 2M NPT | 3M SW | 3M NPT | 6M SW | 6M NPT | 2M NPT | 3M SW | 3M NPT | 6M SW | 6M NPT |
| 1/8" | 0.10 | 0.10 | 0.09 | 0.10 | 0.17 | 0.09 | 0.10 | 0.10 | 0.09 | 0.11 | 0.13 | 0.13 | 0.13 | 0.14 | 0.20 |
| 1/4" | 0.09 | 0.09 | 0.15 | 0.15 | 0.33 | 0.09 | 0.08 | 0.12 | 0.14 | 0.27 | 0.11 | 0.11 | 0.22 | 0.20 | 0.41 |
| 3/8" | 0.13 | 0.12 | 0.29 | 0.29 | 0.45 | 0.10 | 0.11 | 0.24 | 0.26 | 0.39 | 0.17 | 0.15 | 0.39 | 0.43 | 0.63 |
| 1/2" | 0.25 | 0.25 | 0.42 | 0.44 | 0.80 | 0.20 | 0.20 | 0.37 | 0.39 | 0.63 | 0.31 | 0.32 | 0.56 | 0.56 | 0.98 |
| 3/4" | 0.35 | 0.32 | 0.64 | 0.73 | 1.31 | 0.27 | 0.29 | 0.56 | 0.57 | 1.07 | 0.43 | 0.46 | 0.92 | 0.94 | 1.65 |
| 1" | 0.52 | 0.53 | 1.14 | 1.17 | 1.61 | 0.45 | 0.43 | 0.64 | 1.01 | 1.27 | 0.69 | 0.65 | 1.49 | 1.49 | 2.17 |
| 1-1/4" | 0.90 | 0.84 | 1.42 | 1.48 | 2.93 | 0.68 | 0.69 | 1.03 | 1.11 | 2.24 | 1.07 | 1.04 | 1.76 | 1.93 | 3.74 |
| 1-1/2" | 1.08 | 1.07 | 2.63 | 2.79 | 3.79 | 0.82 | 0.79 | 2.05 | 2.22 | 2.54 | 1.39 | 1.35 | 3.27 | 3.37 | 4.71 |
| 2" | 1.70 | 1.50 | 2.92 | 3.28 | 7.31 | 1.41 | 1.35 | 2.23 | 2.52 | 4.62 | 2.16 | 2.04 | 3.53 | 3.95 | 6.87 |
| 2-1/2" | 3.61 | 3.20 | 5.99 | 8.11 | 11.18 | 2.60 | 2.53 | 4.19 | - | 8.16 | 4.11 | 3.98 | 6.99 | 10.05 | 13.11 |
| 3" | 4.81 | 5.39 | 8.88 | 18.10 | 17.73 | 4.23 | 5.10 | 6.15 | 14.54 | 14.16 | 6.12 | 5.90 | 10.19 | 22.00 | 21.70 |
| 4" | 10.21 | 10.95 | 14.85 | 16.77 | 15.76 | 8.96 | 9.41 | 11.67 | - | - | 13.27 | 12.53 | 19.13 | - | 19.00 |

| SIZE NPS | Cross | | | | Full Coupling | | | | Half Coupling | | | |
|-------------|-----------|----------|-----------|----------|---------------|-----------|----------|-----------|---------------|-----------|----------|-----------|
| | 2M NPT | 3M SW | 3M NPT | 6M SW | 3M SW | 3M NPT | 6M SW | 6M NPT | 3M SW | 3M NPT | 6M SW | 6M NPT |
| 1/8" | 0.17 | 0.16 | 0.29 | 0.17 | 0.05 | 0.04 | 0.05 | 0.09 | 0.04 | 0.02 | 0.05 | 0.07 |
| 1/4" | 0.14 | 0.13 | 0.25 | 0.25 | 0.05 | 0.05 | 0.07 | 0.10 | 0.05 | 0.03 | 0.05 | 0.05 |
| 3/8" | 0.21 | 0.20 | 0.44 | 0.45 | 0.07 | 0.07 | 0.11 | 0.20 | 0.07 | 0.03 | 0.12 | 0.09 |
| 1/2" | 0.40 | 0.35 | 0.75 | 0.67 | 0.13 | 0.14 | 0.20 | 0.32 | 0.15 | 0.06 | 0.19 | 0.16 |
| 3/4" | 0.54 | 0.47 | 1.05 | 1.07 | 0.19 | 0.23 | 0.27 | 0.45 | 0.21 | 0.11 | 0.31 | 0.24 |
| 1" | 0.83 | 0.73 | 1.79 | 1.82 | 0.33 | 0.45 | 0.44 | 0.87 | 0.34 | 0.23 | 0.51 | 0.45 |
| 1-1/4" | 1.24 | 1.12 | 2.13 | 2.26 | 0.41 | 0.73 | 0.66 | 1.09 | 0.48 | 0.37 | 0.65 | 0.55 |
| 1-1/2" | 1.75 | 1.58 | 3.93 | 3.95 | 0.59 | 1.18 | 1.11 | 1.94 | 0.56 | 0.54 | 0.91 | 0.95 |
| 2" | 2.65 | 2.25 | 4.27 | 4.42 | 0.86 | 1.40 | 1.62 | 2.87 | 1.09 | 0.70 | 1.92 | 1.39 |
| 2-1/2" | 5.26 | 4.37 | 8.47 | - | 1.40 | 2.29 | - | 4.20 | 1.63 | 1.13 | - | 2.10 |
| 3" | 7.58 | 7.24 | 12.61 | - | 1.78 | 3.38 | - | 6.10 | 2.18 | 1.68 | - | 3.05 |
| 4" | 16.00 | 14.58 | 20.25 | - | 2.95 | 5.65 | - | 10.04 | 3.71 | 3.11 | - | 5.02 |

| SIZE NPS | Reducing Coupling | | | | Cap | | | | Union | | | | Street Elbow | Hex Nipples | Square Head Plug |
|-------------|-------------------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|--------------|-------------|------------------|
| | 3M SW | 3M NPT | 6M SW | 6M NPT | 3M SW | 3M NPT | 6M SW | 6M NPT | 3M SW | 3M NPT | 6M SW | 6M NPT | 3M NPT | 3M NPT | 6M Head Plug |
| 1/8" | 0.04 | 0.05 | - | 0.06 | 0.03 | 0.03 | 0.05 | 0.06 | 0.28 | 0.28 | - | - | 0.12 | 0.01 | 0.01 |
| 1/4" | 0.05 | 0.05 | - | 0.06 | 0.04 | 0.04 | 0.08 | 0.06 | 0.25 | 0.25 | - | - | 0.11 | 0.03 | 0.02 |
| 3/8" | 0.07 | 0.08 | - | 0.18 | 0.05 | 0.05 | 0.10 | 0.09 | 0.25 | 0.26 | 0.38 | 0.35 | 0.24 | 0.04 | 0.03 |
| 1/2" | 0.16 | 0.15 | 0.24 | 0.35 | 0.13 | 0.11 | 0.16 | 0.25 | 0.33 | 0.34 | 0.60 | 0.55 | 0.34 | 0.08 | 0.05 |
| 3/4" | 0.25 | 0.18 | 0.29 | 0.53 | 0.16 | 0.18 | 0.23 | 0.04 | 0.48 | 0.48 | 0.91 | 0.92 | 0.55 | 0.12 | 0.08 |
| 1" | 0.43 | 0.62 | 0.58 | 1.01 | 0.25 | 0.33 | 0.44 | 0.71 | 0.74 | 0.77 | 1.57 | 1.28 | 1.02 | 0.24 | 0.16 |
| 1-1/4" | 0.67 | 0.97 | 1.37 | 1.05 | 0.45 | 0.62 | 0.84 | 0.90 | 1.10 | 1.14 | 1.79 | 1.82 | 1.24 | 0.39 | 0.27 |
| 1-1/2" | 0.85 | 1.49 | 1.07 | 2.03 | 0.59 | 0.72 | 0.94 | 1.44 | 1.81 | 1.39 | 3.37 | 2.85 | 2.01 | 0.36 | 0.38 |
| 2" | 1.66 | 2.20 | 1.83 | 3.86 | 0.96 | 1.09 | 1.55 | 2.25 | 2.16 | 2.43 | 5.24 | 4.70 | 2.91 | 1.00 | 0.63 |
| 2-1/2" | 2.80 | 3.22 | - | 4.20 | 1.62 | 1.92 | - | 3.68 | 3.97 | 3.63 | 7.84 | - | - | 1.29 | 1.08 |
| 3" | 3.14 | 4.82 | - | 6.10 | 2.88 | 2.91 | 3.60 | 5.12 | 5.94 | 5.27 | - | - | - | 1.87 | 1.53 |
| 4" | 5.50 | 8.97 | - | 10.04 | 3.82 | 4.84 | - | 8.60 | 12.79 | 12.00 | - | - | - | 3.37 | 3.36 |

| SIZE NPS | Hex Head Plug | Round Head Plug | Bushing | Reducing inserts | | | | | | | | | | | |
|-------------|---------------|-----------------|---------|------------------|------|------|-------------|------|------|-------------|------|------|---------|------|----|
| | | | | SIZE | 3M | 6M | SIZE | 3M | 6M | SIZE | 3M | 6M | SIZE | 3M | 6M |
| 1/8" | 0.01 | 0.02 | - | 3/8x1/4 | 0.05 | 0.06 | 1-1/4x1/2 | 0.29 | 0.34 | 2x1/2 | 0.79 | 0.97 | 4x2-1/2 | 3.23 | - |
| 1/4" | 0.03 | 0.06 | 0.01 | 1/2x3/8 | 0.07 | 0.09 | 1-1/4x3/8 | 0.32 | 0.36 | 2-1/2x2 | 1.03 | 1.43 | 4x2 | 3.72 | - |
| 3/8" | 0.05 | 0.08 | 0.01 | 1/2x1/4 | 0.07 | 0.08 | 1-1/4x1/4 | 0.34 | 0.37 | 2-1/2x1-1/2 | 1.16 | 1.26 | 4x1-1/2 | 4.20 | - |
| 1/2" | 0.07 | 0.12 | 0.03 | 3/4x1/2 | 0.12 | 0.15 | 1-1/2x1-1/4 | 0.37 | 0.53 | 2-1/2x1-1/4 | 1.45 | 1.39 | 4x1-1/4 | 4.39 | - |
| 3/4" | 0.14 | 0.22 | 0.05 | 3/4x3/8 | 0.08 | 0.12 | 1-1/2x1 | 0.29 | 0.52 | 2-1/2x1 | 1.52 | 1.56 | - | - | - |
| 1" | 0.25 | 0.34 | 0.09 | 3/4x1/4 | 0.10 | 0.13 | 1-1/2x3/4 | 0.36 | 0.48 | 2-1/2x3/4 | 1.53 | 1.65 | - | - | - |
| 1-1/4" | 0.43 | 0.55 | 0.20 | 1x3/4 | 0.17 | 0.27 | 1-1/2x1/2 | 0.41 | 0.52 | 3x2-1/2 | 1.38 | 2.41 | - | - | - |
| 1-1/2" | 0.57 | 0.71 | 0.34 | 1x1/2 | 0.13 | 0.22 | 1-1/2x3/8 | 0.45 | 0.55 | 3x2 | 1.39 | 1.76 | - | - | - |
| 2" | 1.03 | 1.47 | 0.45 | 1x3/8 | 0.16 | 0.21 | 2x1-1/2 | 0.59 | 0.87 | 3x1-1/2 | 1.41 | 2.06 | - | - | - |
| 2-1/2" | 1.62 | 2.34 | 0.60 | 1x1/4 | 0.19 | 0.22 | 2x1-1/4 | 0.51 | 0.61 | 3x1-1/4 | 2.12 | 2.21 | - | - | - |
| 3" | 2.60 | 3.26 | 1.16 | 1-1/4x1 | 0.30 | 0.40 | 2x1 | 0.72 | 0.75 | 3x1 | 2.31 | 2.39 | - | - | - |
| 4" | 5.20 | 6.24 | 3.20 | 1-1/4x3/4 | 0.25 | 0.30 | 2x3/4 | 0.73 | 0.83 | 4x3 | 2.29 | - | - | - | - |



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