



FLANGES

7 FORGED STEEL FLANGES FOR PIPELINE SYSTEM (BLIND & WELDING NECK)

*All dimensions are in inches.

| (7-3.) 400 LB. MSS SP-44 FLANGES | | | | | | | | | |
|---|--------|-------|---------|--------|----------|---------|----|-------|--------|
| SIZE | O.D. | T | T1 | ØK | ØX | P. C.D. | N | Ød | LN |
| 12 | 20 1/2 | 2 1/4 | 2 1/4 | 15 | 14 3/4 | 17 3/4 | 16 | 1 3/8 | 5 3/8 |
| 14 | 23 | 2 3/8 | 2 3/8 | 16 1/4 | 16 3/4 | 20 1/4 | 20 | 1 3/8 | 5 7/8 |
| 16 | 25 1/2 | 2 1/2 | 2 1/2 | 18 1/2 | 19 | 22 1/2 | 20 | 1 1/2 | 6 |
| 18 | 28 | 2 5/8 | 2 5/8 | 21 | 21 | 24 3/4 | 24 | 1 1/2 | 6 1/2 |
| 20 | 30 1/2 | 2 3/4 | 2 3/4 | 23 | 23 1/8 | 27 | 24 | 1 5/8 | 6 5/8 |
| 22 | 33 | 2 7/8 | 2 7/8 | 25 1/4 | 25 1/4 | 29 1/4 | 24 | 1 3/4 | 6 3/4 |
| 24 | 36 | 3.00 | 3.00 | 27 1/4 | 27 5/8 | 32 | 24 | 1 7/8 | 6 7/8 |
| 26 | 38 1/4 | 3 1/2 | 3 7/8 | 29 1/2 | 28 5/8 | 34 1/2 | 28 | 1 7/8 | 7 5/8 |
| 28 | 40 3/4 | 3 3/4 | 4 1/8 | 31 1/2 | 30 13/16 | 37 | 28 | 2 | 8 1/8 |
| 30 | 43 | 4 | 4 3/8 | 33 3/4 | 32 15/16 | 39 1/4 | 28 | 2 1/8 | 8 5/8 |
| 32 | 45 1/4 | 4 1/4 | 4 9/16 | 36 | 35 | 41 1/2 | 28 | 2 1/8 | 9 1/8 |
| 34 | 47 1/2 | 4 3/8 | 4 13/16 | 38 | 37 3/16 | 43 1/2 | 28 | 2 1/8 | 9 1/2 |
| 36 | 50 | 4 1/2 | 5 1/16 | 40 1/4 | 39 3/8 | 46 | 32 | 2 1/8 | 9 7/8 |
| 40 | 55 | 5 | 6 5/16 | 45 | 44 | 50 3/4 | 32 | 2 3/8 | 11 |
| 42 | 57 | 5 1/8 | 6 7/16 | 47 | 45 1/2 | 52 3/4 | 32 | 2 5/8 | 11 3/8 |
| 48 | 64 1/4 | 5 7/8 | 6 15/16 | 55 | 52 3/4 | 59 | 32 | 2 7/8 | 12 3/8 |

| (7-4.) 600 LB. MSS SP-44 FLANGES | | | | | | | | | |
|---|--------|-------|---------|--------|----------|--------|----|-------|--------|
| 12 | 22 | 2 5/8 | 2 5/8 | 15 | 15 3/4 | 19 1/4 | 20 | 1 3/8 | 6 1/8 |
| 14 | 23 3/4 | 2 3/4 | 2 5/8 | 16 1/4 | 17 | 20 3/4 | 20 | 1 1/2 | 6 1/2 |
| 16 | 27 | 3 | 3 | 18 1/2 | 19 1/2 | 23 3/4 | 20 | 1 5/8 | 7 |
| 18 | 29 1/4 | 3 1/4 | 3 1/4 | 21 | 21 1/2 | 35 3/4 | 20 | 1 3/4 | 7 1/4 |
| 20 | 32 | 3 1/2 | 3 1/2 | 23 | 24 | 28 1/2 | 24 | 1 3/4 | 7 1/2 |
| 22 | 34 1/4 | 3 3/4 | 3 3/4 | 25 1/4 | 26 1/4 | 30 5/8 | 24 | 1 7/8 | 7 3/4 |
| 24 | 37 | 4 | 4 | 27 1/4 | 28 1/4 | 33 | 24 | 2 | 8 |
| 26 | 40 | 4 1/4 | 4 15/16 | 29 1/2 | 29 7/16 | 36 | 28 | 2 | 8 3/4 |
| 28 | 42 1/4 | 4 3/8 | 5 3/16 | 31 1/2 | 31 5/8 | 38 | 28 | 2 1/8 | 9 1/4 |
| 30 | 44 1/2 | 4 1/2 | 5 1/2 | 33 3/4 | 33 15/16 | 40 1/4 | 28 | 2 1/8 | 9 3/4 |
| 32 | 47 | 4 5/8 | 5 13/16 | 36 | 36 1/8 | 42 1/2 | 28 | 2 3/8 | 10 1/4 |
| 34 | 49 | 4 3/4 | 6 1/16 | 38 | 38 5/8 | 44 1/2 | 28 | 2 3/8 | 10 5/8 |
| 36 | 51 3/4 | 4 7/8 | 6 3/8 | 40 1/4 | 40 5/8 | 47 | 28 | 2 5/8 | 11 1/8 |
| 40 | 56 3/4 | 5 3/8 | 6 5/16 | 45 | 44 1/2 | 51 3/4 | 28 | 2 7/8 | 12 1/4 |
| 42 | 58 3/4 | 5 1/2 | 6 7/16 | 47 | 46 1/2 | 53 3/4 | 28 | 2 7/8 | 12 3/4 |
| 48 | 66 | 6 1/4 | 6 15/16 | 55 | 52 3/4 | 60 1/4 | 28 | 3 1/8 | 14 3/8 |



FLANGES

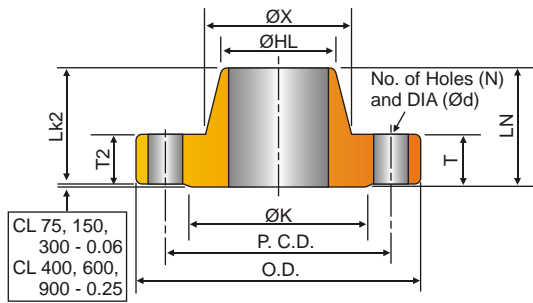
7 FORGED STEEL FLANGES FOR PIPELINE SYSTEM (BLIND & WELDING NECK)

*All dimensions are in inches.

| (7-5.) 900 LB. MSS SP-44 FLANGES | | | | | | | | | |
|---|-----------|----------|-----------|-----------|-----------|----------------|----------|-----------|-----------|
| SIZE | OD | T | T1 | ØK | ØX | P. C.D. | N | Ød | LN |
| 12 | 24 | 3 1/8 | 3 1/8 | 15 | 16 1/2 | 21 | 20 | 1 1/2 | 7 7/8 |
| 14 | 25 1/4 | 3 3/8 | 3 3/8 | 16 1/4 | 17 3/4 | 22 | 20 | 1 5/8 | 8 3/8 |
| 16 | 27 3/4 | 3 1/2 | 3 1/2 | 18 ½ | 20 | 24 1/4 | 20 | 1 3/4 | 8 1/2 |
| 18 | 31 | 4 | 4 | 21 | 22 1/4 | 27 | 20 | 2 | 9 |
| 20 | 33 3/4 | 4 1/4 | 4 1/4 | 23 | 24 1/2 | 29 1/2 | 20 | 2 1/8 | 9 3/4 |
| 24 | 41 | 5 1/2 | 5 1/2 | 27 1/4 | 29 1/2 | 35 1/2 | 20 | 2 5/8 | 11 1/2 |
| 26 | 42 3/4 | 5 1/2 | 6 5/16 | 29 1/2 | 30 ½ | 37 1/2 | 20 | 2 7/8 | 11 1/4 |
| 28 | 46 | 5 5/8 | 6 3/4 | 31 1/2 | 32 3/4 | 40 1/4 | 20 | 3 1/8 | 11 3/4 |
| 30 | 48 1/2 | 5 7/8 | 7 3/16 | 33 3/4 | 35 | 42 3/4 | 20 | 3 1/8 | 12 1/4 |
| 32 | 51 3/4 | 6 1/4 | 7 5/8 | 36 | 37 1/4 | 45 1/2 | 20 | 3 3/8 | 13 |
| 34 | 55 | 6 1/2 | 8 1/16 | 38 | 39 5/8 | 48 1/4 | 20 | 3 5/8 | 13 3/4 |
| 36 | 57 1/2 | 6 3/4 | 8 7/16 | 40 1/4 | 41 7/8 | 50 3/4 | 20 | 3 5/8 | 14 1/4 |

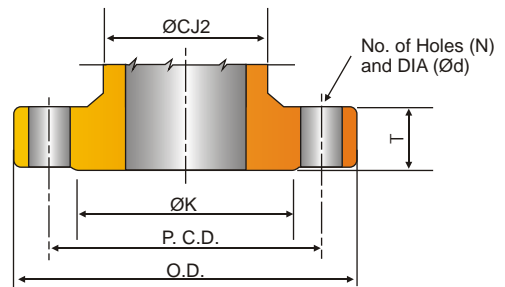


FLANGES



Weld Neck Flange

(Fig. 1)



Integral Flange

(Fig. 2)

8 FORGED STEEL FLANGES (AS PER API-605)

*All dimensions are in inches.

| (8-1.) CLASS-75 WELD NECK & INTEGRAL FLANGES | | | | | | | | | |
|--|-------|------|-------|-------|-------|--------|----|------|------|
| SIZE | O.D. | T | ØK | ØHL | J2 | P.C.D. | N | Ød | LN |
| 26 | 30.00 | 1.31 | 27.75 | 26.06 | 26.62 | 28.50 | 36 | 0.75 | 2.31 |
| 28 | 32.00 | 1.31 | 29.75 | 28.06 | 28.62 | 30.50 | 40 | 0.75 | 2.44 |
| 30 | 34.00 | 1.31 | 31.75 | 30.06 | 30.62 | 32.50 | 44 | 0.75 | 2.56 |
| 32 | 36.00 | 1.38 | 33.75 | 32.06 | 32.62 | 34.50 | 48 | 0.75 | 2.75 |
| 34 | 38.00 | 1.38 | 35.75 | 34.06 | 34.62 | 36.50 | 52 | 0.75 | 2.88 |
| 36 | 40.69 | 1.44 | 38.00 | 36.06 | 36.81 | 39.06 | 40 | 0.88 | 3.38 |
| 38 | 42.69 | 1.50 | 40.00 | 38.06 | 38.81 | 41.06 | 40 | 0.88 | 3.50 |
| 40 | 44.69 | 1.50 | 42.00 | 40.06 | 40.81 | 43.06 | 44 | 0.88 | 3.62 |
| 42 | 46.69 | 1.56 | 44.00 | 42.06 | 42.81 | 45.06 | 48 | 0.88 | 3.75 |
| 44 | 49.25 | 1.69 | 46.25 | 44.06 | 44.88 | 47.38 | 36 | 1.00 | 4.12 |
| 46 | 51.25 | 1.75 | 48.25 | 46.06 | 46.88 | 49.38 | 40 | 1.00 | 4.25 |
| 48 | 53.25 | 1.81 | 50.25 | 48.06 | 48.88 | 51.38 | 44 | 1.00 | 4.38 |
| 50 | 55.25 | 1.88 | 52.25 | 50.06 | 50.88 | 53.38 | 44 | 1.00 | 4.56 |
| 52 | 57.38 | 1.88 | 54.25 | 52.06 | 53.00 | 55.50 | 48 | 1.00 | 4.75 |
| 54 | 59.38 | 1.94 | 56.25 | 54.06 | 55.00 | 57.50 | 48 | 1.00 | 4.94 |
| 56 | 62.00 | 2.00 | 58.50 | 56.06 | 57.12 | 59.88 | 40 | 1.12 | 5.31 |
| 58 | 64.00 | 2.06 | 60.50 | 58.06 | 59.12 | 61.88 | 44 | 1.12 | 5.44 |
| 60 | 66.00 | 2.19 | 62.50 | 60.06 | 61.12 | 63.88 | 44 | 1.12 | 5.69 |



FLANGES

8 FORGED STEEL FLANGES (AS PER API-605)

*All dimensions are in inches.

| (8-2.) CLASS-150 WELD NECK & INTEGRAL FLANGES | | | | | | | | | |
|--|------------|----------|-----------|------------|-----------|----------------|----------|-----------|-----------|
| SIZE | O.D | T | ØK | ØHL | J2 | P. C.D. | N | Ød | LN |
| 26 | 30.94 | 1.62 | 28.00 | 26.06 | 26.62 | 29.31 | 36 | 0.88 | 3.50 |
| 28 | 32.94 | 1.75 | 30.00 | 28.06 | 28.62 | 31.31 | 40 | 0.88 | 3.75 |
| 30 | 34.94 | 1.75 | 32.00 | 30.06 | 30.62 | 33.31 | 44 | 0.88 | 3.94 |
| 32 | 37.06 | 1.81 | 34.00 | 32.06 | 32.75 | 35.44 | 48 | 0.88 | 4.25 |
| 34 | 39.56 | 1.94 | 36.25 | 34.06 | 34.75 | 37.69 | 40 | 1.00 | 4.34 |
| 36 | 41.62 | 2.06 | 38.25 | 36.06 | 36.81 | 39.75 | 44 | 1.00 | 4.62 |
| 38 | 44.25 | 2.12 | 40.25 | 38.12 | 38.94 | 42.12 | 40 | 1.12 | 4.88 |
| 40 | 46.25 | 2.19 | 42.50 | 40.12 | 40.94 | 44.12 | 44 | 1.12 | 5.06 |
| 42 | 48.25 | 2.31 | 44.50 | 42.12 | 42.94 | 46.12 | 48 | 1.12 | 5.25 |
| 44 | 50.25 | 2.38 | 46.50 | 44.12 | 44.94 | 48.12 | 52 | 1.12 | 5.38 |
| 46 | 52.81 | 2.44 | 48.62 | 46.12 | 47.12 | 50.56 | 40 | 1.25 | 5.69 |
| 48 | 54.81 | 2.56 | 50.75 | 48.12 | 49.12 | 52.56 | 44 | 1.25 | 5.88 |
| 50 | 56.81 | 2.69 | 52.75 | 50.12 | 51.12 | 54.56 | 48 | 1.25 | 6.06 |
| 52 | 58.81 | 2.75 | 54.75 | 52.12 | 53.12 | 56.56 | 52 | 1.25 | 6.19 |
| 54 | 61.00 | 2.81 | 56.75 | 54.12 | 55.31 | 58.75 | 56 | 1.25 | 6.38 |
| 56 | 63.00 | 2.88 | 58.75 | 56.12 | 57.31 | 60.75 | 60 | 1.25 | 6.56 |
| 58 | 65.94 | 2.94 | 60.75 | 58.12 | 59.50 | 63.44 | 48 | 1.38 | 6.88 |
| 60 | 67.94 | 3.00 | 63.00 | 60.12 | 61.50 | 65.44 | 52 | 1.38 | 7.06 |

| (8-3.) CLASS-300 WELD NECK & INTEGRAL FLANGES | | | | | | | | | |
|--|------------|----------|-----------|------------|-----------|----------------|----------|-----------|-----------|
| SIZE | O.D | T | ØK | ØHL | J2 | P. C.D. | N | Ød | LN |
| 26 | 34.12 | 3.50 | 29.00 | 26.19 | 27.12 | 31.62 | 32 | 1.38 | 5.69 |
| 28 | 36.25 | 3.50 | 31.00 | 28.19 | 29.25 | 33.75 | 36 | 1.38 | 5.88 |
| 30 | 39.00 | 3.69 | 33.25 | 30.25 | 31.50 | 36.25 | 36 | 1.50 | 6.22 |
| 32 | 41.50 | 4.06 | 35.50 | 32.25 | 33.50 | 38.50 | 32 | 1.62 | 6.62 |
| 34 | 43.62 | 4.06 | 37.50 | 34.25 | 35.62 | 40.62 | 36 | 1.62 | 6.81 |
| 36 | 46.12 | 4.06 | 39.75 | 36.25 | 37.62 | 42.88 | 32 | 1.75 | 7.12 |
| 38 | 48.12 | 4.38 | 41.75 | 38.25 | 39.62 | 44.88 | 36 | 1.75 | 7.56 |
| 40 | 50.12 | 4.56 | 43.88 | 40.25 | 41.38 | 46.88 | 40 | 1.75 | 7.81 |
| 42 | 52.50 | 4.69 | 46.00 | 42.31 | 43.38 | 49.00 | 36 | 1.88 | 8.06 |
| 44 | 54.50 | 5.00 | 48.00 | 44.31 | 45.62 | 51.00 | 40 | 1.88 | 8.44 |
| 46 | 57.50 | 5.06 | 50.00 | 46.31 | 47.88 | 53.75 | 36 | 2.00 | 8.75 |
| 48 | 59.50 | 5.06 | 52.25 | 48.31 | 49.88 | 55.75 | 40 | 2.00 | 8.81 |
| 50 | 61.50 | 5.44 | 54.25 | 50.31 | 51.88 | 57.75 | 44 | 2.00 | 9.25 |
| 52 | 63.50 | 5.62 | 56.25 | 52.31 | 53.88 | 59.75 | 48 | 2.00 | 9.56 |
| 54 | 65.88 | 5.38 | 58.25 | 54.31 | 56.25 | 62.12 | 48 | 2.00 | 9.44 |
| 56 | 69.50 | 6.06 | 60.50 | 56.31 | 58.38 | 65.00 | 36 | 2.38 | 10.56 |
| 58 | 71.94 | 6.06 | 62.75 | 58.31 | 60.81 | 67.44 | 40 | 2.38 | 10.81 |
| 60 | 73.94 | 5.94 | 65.00 | 60.31 | 62.69 | 69.44 | 40 | 2.38 | 10.69 |



FLANGES

8 FORGED STEEL FLANGES (AS PER API-605)

*All dimensions are in inches.

| (8-4.) CLASS-400 WELD NECK FLANGES | | | | | | | | | |
|---|------------|----------|-----------|------------|-----------|----------------|----------|-----------|------------|
| SIZE | O.D | T | ØK | ØHL | ØX | P. C.D. | N | Ød | LN2 |
| 26 | 33.50 | 3.50 | 28.00 | 26.00 | 27.12 | 30.75 | 28 | 1.50 | 5.88 |
| 28 | 36.00 | 3.75 | 30.00 | 28.00 | 29.12 | 33.00 | 24 | 1.62 | 6.25 |
| 30 | 38.25 | 4.00 | 32.25 | 30.00 | 31.25 | 35.25 | 28 | 1.62 | 6.69 |
| 32 | 40.75 | 4.25 | 34.38 | 32.00 | 33.25 | 37.50 | 28 | 1.75 | 7.06 |
| 34 | 42.75 | 4.38 | 36.50 | 34.00 | 35.38 | 39.50 | 32 | 1.75 | 7.38 |
| 36 | 45.50 | 4.69 | 38.62 | 36.00 | 37.50 | 42.00 | 28 | 1.88 | 7.88 |
| 38 | 47.50 | 4.88 | 40.75 | 38.00 | 39.50 | 44.00 | 32 | 1.88 | 8.12 |
| 40 | 50.00 | 5.12 | 43.00 | 40.00 | 41.50 | 46.25 | 32 | 2.00 | 8.50 |
| 42 | 52.00 | 5.25 | 45.00 | 42.00 | 43.62 | 48.25 | 32 | 2.00 | 8.81 |
| 44 | 54.50 | 5.50 | 47.25 | 44.00 | 45.62 | 50.50 | 32 | 2.12 | 9.19 |
| 46 | 56.75 | 5.75 | 49.50 | 46.00 | 47.75 | 52.75 | 36 | 2.12 | 9.62 |
| 48 | 59.50 | 6.00 | 51.50 | 48.00 | 49.88 | 55.25 | 28 | 2.38 | 10.12 |
| 50 | 61.75 | 6.19 | 53.62 | 50.00 | 52.00 | 57.50 | 32 | 2.38 | 10.56 |
| 52 | 63.75 | 6.38 | 55.62 | 52.00 | 54.00 | 59.50 | 32 | 2.38 | 10.88 |
| 54 | 67.00 | 6.69 | 57.88 | 54.00 | 56.12 | 62.25 | 28 | 2.62 | 11.38 |
| 56 | 69.00 | 6.88 | 60.12 | 56.00 | 58.25 | 64.25 | 32 | 2.62 | 11.75 |
| 58 | 71.00 | 7.00 | 62.12 | 58.00 | 60.25 | 66.25 | 32 | 2.62 | 12.06 |
| 60 | 74.25 | 7.31 | 64.38 | 60.00 | 62.38 | 69.00 | 32 | 2.88 | 12.56 |

| (8-5.) CLASS-600 WELD NECK FLANGES | | | | | | | | | |
|---|------------|----------|-----------|------------|-----------|----------------|----------|-----------|-----------|
| SIZE | O.D | T | ØK | ØHL | ØX | P. C.D. | N | Ød | LN |
| 26 | 35.00 | 4.38 | 28.62 | 26.00 | 27.50 | 31.75 | 28 | 1.75 | 7.12 |
| 28 | 37.50 | 4.56 | 30.88 | 28.00 | 29.62 | 34.00 | 28 | 1.88 | 7.50 |
| 30 | 40.25 | 4.94 | 33.12 | 30.00 | 31.75 | 36.50 | 28 | 2.00 | 8.06 |
| 32 | 42.75 | 5.12 | 35.25 | 32.00 | 33.88 | 38.75 | 28 | 2.12 | 8.50 |
| 34 | 45.75 | 5.56 | 37.50 | 34.00 | 36.00 | 41.50 | 24 | 2.38 | 9.19 |
| 36 | 47.75 | 5.75 | 39.75 | 36.00 | 38.12 | 43.50 | 28 | 2.38 | 9.56 |
| 38 | 50.00 | 6.00 | 41.50 | 38.00 | 40.25 | 45.75 | 28 | 2.38 | 10.00 |
| 40 | 52.00 | 6.25 | 43.75 | 40.00 | 42.25 | 47.75 | 32 | 2.38 | 10.38 |
| 42 | 55.25 | 6.62 | 46.00 | 42.00 | 44.38 | 50.50 | 28 | 2.62 | 11.00 |
| 44 | 57.25 | 6.81 | 48.25 | 44.00 | 46.50 | 52.50 | 32 | 2.62 | 11.38 |
| 46 | 59.50 | 7.06 | 50.25 | 46.00 | 48.62 | 54.75 | 32 | 2.62 | 11.81 |
| 48 | 62.75 | 7.44 | 52.50 | 48.00 | 50.75 | 57.50 | 32 | 2.88 | 12.44 |
| 50 | 65.75 | 7.75 | 54.50 | 50.00 | 52.88 | 60.00 | 28 | 3.12 | 12.94 |
| 52 | 67.75 | 8.00 | 56.50 | 52.00 | 54.88 | 62.00 | 32 | 3.12 | 13.25 |
| 54 | 70.00 | 8.25 | 58.75 | 54.00 | 57.00 | 64.25 | 32 | 3.12 | 13.75 |
| 56 | 73.00 | 8.56 | 60.75 | 56.00 | 59.12 | 66.75 | 32 | 3.38 | 14.25 |
| 58 | 75.00 | 8.75 | 63.00 | 58.00 | 61.12 | 68.75 | 32 | 3.38 | 14.56 |
| 60 | 78.50 | 9.19 | 65.25 | 60.00 | 63.38 | 71.75 | 28 | 3.62 | 15.31 |



FLANGES

8 FORGED STEEL FLANGES (AS PER API-605)

*All dimensions are in inches.

| (8-6.) CLASS-900 WELD NECK FLANGES | | | | | | | | | |
|---|------------|----------|-----------|------------|-----------|----------------|----------|-----------|-----------|
| SIZE | O.D | T | ØK | ØHL | ØX | P. C.D. | N | Ød | LN |
| 26 | 40.25 | 5.31 | 30.00 | 26.00 | 29.25 | 35.50 | 20 | 2.62 | 10.19 |
| 28 | 43.50 | 5.81 | 32.25 | 28.00 | 31.38 | 38.25 | 20 | 2.88 | 10.88 |
| 30 | 46.50 | 6.12 | 34.50 | 30.00 | 33.50 | 40.75 | 20 | 3.12 | 11.38 |
| 32 | 48.75 | 6.31 | 36.50 | 32.00 | 35.75 | 43.00 | 20 | 3.12 | 11.94 |
| 34 | 51.75 | 6.75 | 39.00 | 34.00 | 37.88 | 45.50 | 20 | 3.38 | 12.56 |
| 36 | 53.00 | 6.81 | 40.50 | 36.00 | 40.00 | 47.25 | 24 | 3.12 | 12.81 |
| 38 | 57.50 | 7.50 | 43.25 | 38.00 | 42.25 | 50.75 | 20 | 3.62 | 13.88 |
| 40 | 59.50 | 7.75 | 45.75 | 40.00 | 44.38 | 52.75 | 24 | 3.62 | 14.31 |
| 42 | 61.50 | 8.12 | 47.75 | 42.00 | 46.31 | 54.75 | 24 | 3.62 | 14.62 |
| 44 | 64.88 | 8.44 | 50.00 | 44.00 | 48.62 | 57.62 | 24 | 3.88 | 15.38 |
| 46 | 68.25 | 8.88 | 52.50 | 46.00 | 50.88 | 60.50 | 24 | 4.12 | 16.19 |
| 48 | 70.25 | 9.19 | 54.50 | 48.00 | 52.88 | 62.50 | 24 | 4.12 | 16.50 |