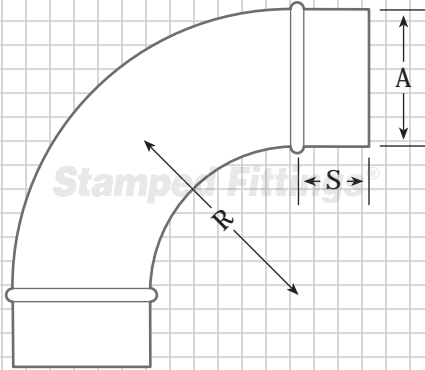
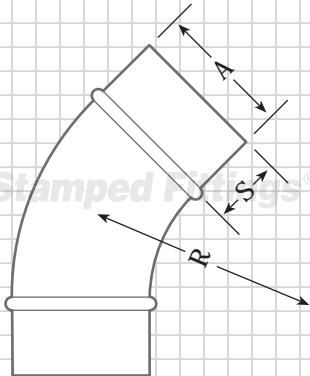


90° Die Stamped Flangeless Elbow  
Galvanized (DSE90)  
Galvaneal (NDSE90)



45° Die Stamped Flangeless Elbow  
Galvanized (DSE45)  
Galvaneal (NDSE45)



### Key

A = Diameter  
R = 1-1/2 A (centerline radius)  
S = 2"

### Materials Available

- n Galvanized (3" - 4"), 24 ga.
- n Galvanized (5" - 12"), 22 ga.
- n Galvaneal [paint grip] (4"), 24 ga.
- n Galvaneal [paint grip] (5" - 12"), 22 ga.

### Welding Process

Flangeless elbows are continuously stitch welded on the throat and heel from end to end (past the bead).

### Dimensions

| (A) | 90° (R) | Wt. Per 90° Elbow (DSE90) | Wt. Per 90° Elbow (NDSE90) |
|-----|---------|---------------------------|----------------------------|
| 3"  | 4.5"    | 0.8#                      | N/A                        |
| 4"  | 6.0"    | 1.4#                      | 1.4#                       |
| 5"  | 7.5"    | 1.8#                      | 2.5#                       |
| 6"  | 9.0"    | 2.2#                      | 3.4#                       |
| 7"  | 10.5"   | 3.5#                      | 4.4#                       |
| 8"  | 12.0"   | 4.7#                      | 5.4#                       |
| 9"  | 13.5"   | 6.1#                      | 5.9#                       |
| 10" | 15.0"   | 7.6#                      | 6.4#                       |
| 12" | 18.0"   | 10.2#                     | 9.0#                       |
| (A) | 45° (R) | Wt. Per 45° Elbow (DSE45) | Wt. Per 45° Elbow (NDSE45) |
| 3"  | 4.5"    | 0.6#                      | N/A                        |
| 4"  | 6.0"    | 0.8#                      | 0.8#                       |
| 5"  | 7.5"    | 1.0#                      | 1.5#                       |
| 6"  | 9.0"    | 1.5#                      | 2.0#                       |
| 7"  | 10.5"   | 1.8#                      | 2.6#                       |
| 8"  | 12.0"   | 3.0#                      | 3.2#                       |
| 9"  | 13.5"   | 3.5#                      | 4.0#                       |
| 10" | 15.0"   | 4.2#                      | 4.8#                       |
| 12" | 18.0"   | 6.5#                      | 6.6#                       |