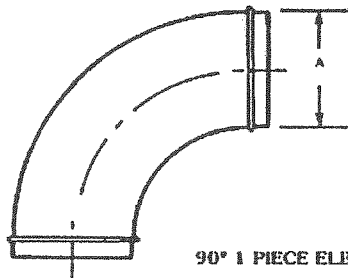
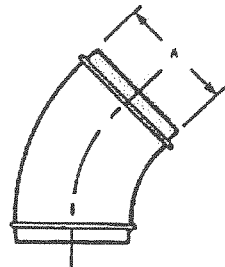


**ROUND FITTINGS AND OTHER INFORMATION**

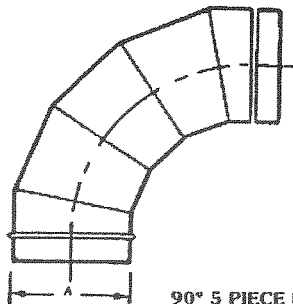
*Based On SMACNA Standards*



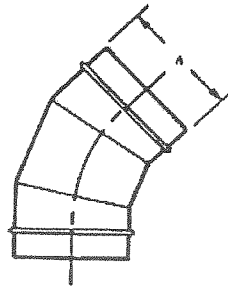
**90° 1 PIECE ELBOW**  
Centerline Radius =  $1.5 \times A$   
Sizes 3" Thru 12"



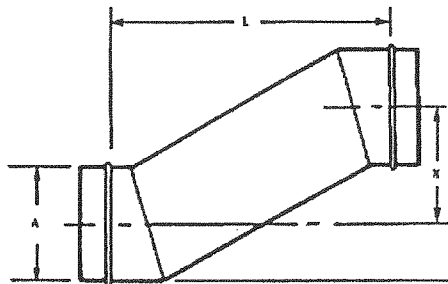
**45° 1 PIECE ELBOW**  
Centerline Radius =  $1.5 \times A$   
Sizes 3" Thru 12"



**90° 5 PIECE ELBOW**  
Centerline Radius =  $1.5 \times A$



**45° 3 PIECE ELBOW**  
Centerline Radius =  $1.5 \times A$



**OFFSET**

**ALL ELBOWS**  
23" Throat Radius + Larger  
No. "S" is Added (2" Bead is Lost From Radius)