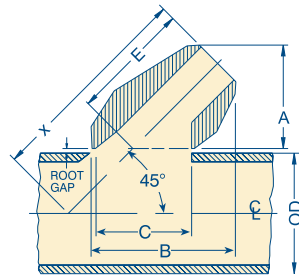
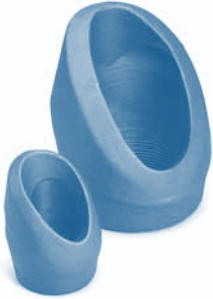
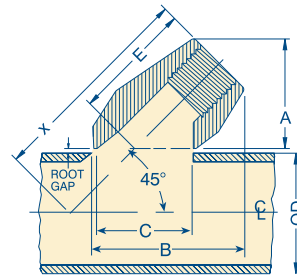


45° Connections

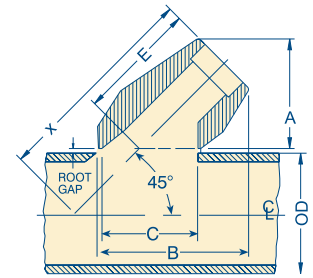
Forged



BUTT WELD

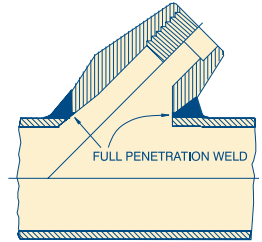


THREADED



SOCKET-WELD

45° BRANCH CONNECTIONS THREADED, SOCKET-WELD AND BUTT-WELD ENDS



Nominal Run Pipe Size	Outlet Size	Dimensions															
		CL 3000 Threaded and Socket-Weld				CL 6000 Threaded and Socket-Weld				STD & XS Butt-Weld				Sch. 160 and XXS Butt-Weld			
		A	B	C	E	A	B	C	E	A	B	C	E	A	B	C	
2-1/2 12	-1-1/4 -3	1/4	1-9/16	2-11/32	1-7/16	1-9/16	1-9/16	2-11/32	1-7/16	1-9/16	1-5/16	2-3/32	1-7/16	1-9/16	1-9/16	2-5/16	1-7/16
2-1/2 12	-1-1/4 -3	3/8	1-9/16	2-11/32	1-7/16	1-9/16	1-9/16	2-11/32	1-7/16	1-9/16	1-5/16	2-3/32	1-7/16	1-9/16	1-9/16	2-5/16	1-7/16
2-1/2 12	-1-1/4 -3	1/2	1-9/16	2-11/32	1-7/16	1-9/16					1-3/8	2-5/32	1-7/16	1-9/16			
1-1/2 5 12	-1-1/4 -2 -6	1/2					1-7/8	2-3/4	1-3/4	1-29/32					1-13/16	2-3/4	1-3/4
1-1/2 5 12	-1-1/4 -2 -6	3/4	1-7/8	2-3/4	1-3/4	1-29/32					1-11/16	2-17/32	1-3/4	1-29/32			
2-1/2 5 12	-2 -3 -6	3/4					2-3/16	3-1/4	2-1/8	2-3/16					2-1/8	3-1/4	2-1/8
2-1/2 5 12	-2 -3 -6	1	2-3/16	3-1/4	2-1/8	2-3/16	2-1/2	3-21/32	2-5/8	2-15/32	1-31/32	3	2-1/8	2-3/16	2-1/2	3-13/16	2-5/8
2-1/2 5 12	-2 -3 -6	1-1/4	2-1/2	3-27/32	2-5/8	2-15/16	2-3/4	4-7/32	3-1/32	2-5/8	2-9/32	3-19/32	2-5/8	2-15/32	2-3/4	4-1/4	3
2-1/2 5 12	-2 -3 -6	1-1/2	2-3/4	4-7/32	3-1/32	2-5/8					2-15/32	3-31/32	3-1/32	2-5/8			
5 8 12	-4 -6 -10	1-1/2					3-3/8	5-7/16	4-1/8	3-5/32					3-3/8	5-3/8	4-1/8
5 8 12	-4 -6 -10	2	3-3/8	5-7/16	4-1/8	3-5/32	3-3/8	5-7/16	4-1/8	3-5/32	3-3/16	5-1/4	4-1/8	3-13/32			
5 8 12	-4 -6 -10	2-1/2									3-5/32	5-3/16	4-1/8	3-5/52			
Order to Specific Run Pipe Sizes	3										3-13/16	6-1/4	4-31/32	3-25/32			
	4										4-3/4	7-13/16	6-7/16	4-9/16			

Also available for run sizes through 36".
 $x = (OD/2 + \text{Root Gap}) / .7071 + E$
 See footnotes at bottom of page 25.