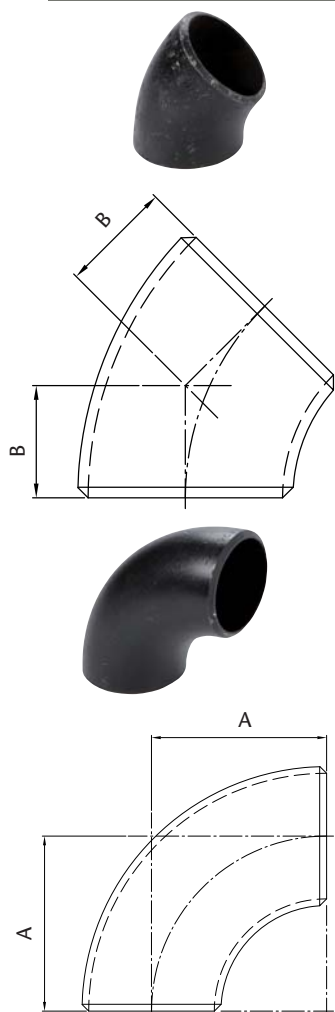


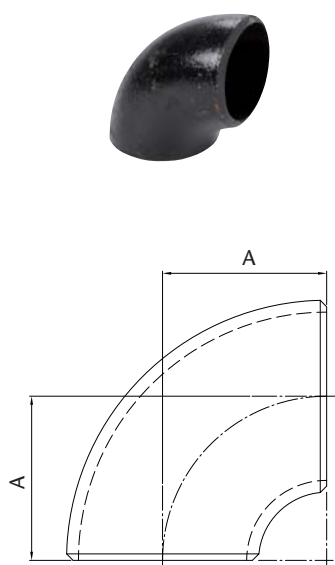
4.3.3. DIMENSIONS (ASME B16.9 – ASME B36.10)

45° ELBOW LONG RADIUS (LR) – STD- and 90° LONG RADIUS (LR) -STD and XS-



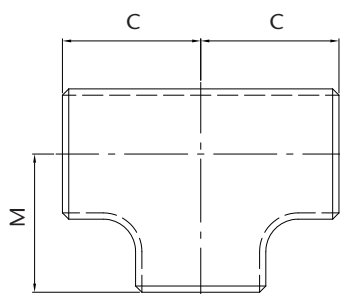
CODE			SIZE					WALL THICKNESS			
45° CODE STD	90° CODE STD	90° CODE XS	NPS	DN	Outside diameter at bevel (mm)	Radius A (mm)	Center to end B (mm)	STD (mm)	STD Schedule No.	XS (mm)	XS Schedule No.
CSTL450M	CSTL900M	CXSL900M	1/2"	15	21,3	38	16	2,77	40	3,73	80
CSTL450T	CSTL900T	CXSL900T	3/4"	20	26,7	38	19	2,87	40	3,91	80
CSTL4501	CSTL9001	CXSL9001	1"	25	33,4	38	22	3,38	40	4,55	80
CSTL451C	CSTL901C	CXSL901C	1 1/4"	32	42,2	48	25	3,56	40	4,85	80
CSTL451M	CSTL901M	CXSL901M	1 1/2"	40	48,3	57	29	3,68	40	5,08	80
CSTL4502	CSTL9002	CXSL9002	2"	50	60,3	76	35	3,91	40	5,54	80
CSTL452M	CSTL902M	CXSL902M	2 1/2"	65	73,0	95	44	5,16	40	7,01	80
CSTL4503	CSTL9003	CXSL9003	3"	80	88,9	114	51	5,49	40	7,62	80
----	CSTL903M	----	3 1/2"	90	101,6	133	57	5,74	40	8,08	80
CSTL4504	CSTL9004	CXSL9004	4"	100	114,3	152	64	6,02	40	8,56	80
CSTL4505	CSTL9005	CXSL9005	5"	125	141,3	190	79	6,55	40	9,53	80
CSTL4506	CSTL9006	CXSL9006	6"	150	168,3	229	95	7,11	40	10,97	80
CSTL4508	CSTL9008	CXSL9008	8"	200	219,1	305	127	8,18	40	12,70	80
CSTL4510	CSTL9010	----	10"	250	273,0	381	159	9,27	40	12,70	60
CSTL4512	CSTL9012	----	12"	300	323,8	457	190	9,53	....	12,70	....
----	CSTL9014	----	14"	350	355,6	533	222	9,53	30	12,70	....
----	CSTL9016	----	16"	400	406,4	610	254	9,53	30	12,70	40
----	CSTL9018	----	18"	450	457,0	686	286	9,53	....	12,70	....
----	CSTL9020	----	20"	500	508,0	762	318	9,53	20	12,70	30
----	CSTL9024	----	24"	600	610,0	914	381	9,53	20	12,70	....

90° ELBOW SHORT RADIUS (SR) -STD-



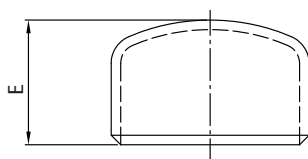
CODE	NPS	DN	Outside diameter at bevel (mm)	Radius A (mm)	WALL THICKNESS	
					STD (mm)	STD Schedule No.
----	1"	25	33,4	25	3,38	40
----	1 1/4"	32	42,2	32	3,56	40
CSTS901M	1 1/2"	40	48,3	38	3,68	40
CSTS9002	2"	50	60,3	51	3,91	40
CSTS902M	2 1/2"	65	73,0	64	5,16	40
CSTS9003	3"	80	88,9	76	5,49	40
----	3 1/2"	90	101,6	89	5,74	40
CSTS9004	4"	100	114,3	102	6,02	40
CSTS9005	5"	125	141,3	127	6,55	40
CSTS9006	6"	150	168,3	152	7,11	40
CSTS9008	8"	200	219,1	203	8,18	40
CSTS9010	10"	250	273,0	254	9,27	40
CSTS9012	12"	300	323,8	305	9,53	....
----	14"	350	355,6	356	9,53	30
----	16"	400	406,4	406	9,53	30
----	18"	450	457,0	457	9,53	....
----	20"	500	508,0	508	9,53	20
----	24"	600	610,0	559	9,53	20

TEE – STD and XS-



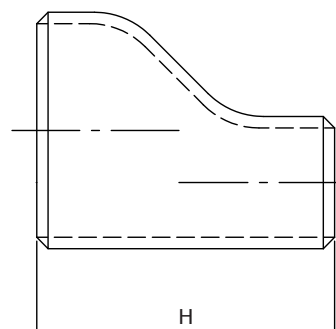
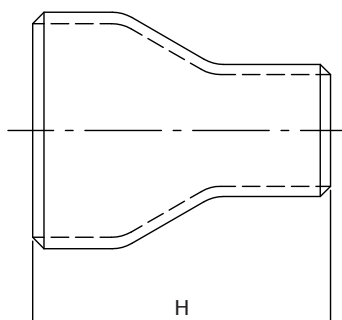
CODE STD	CODE XS	NPS	DN	Outside diameter at bevel (mm)	Length 2C (mm)	Length M (mm)	WALL THICKNESS			
							STD (mm)	STD Schedule No.	XS (mm)	XS Schedule No.
CTXXX21	CTXSXX0M	1/2"	15	21,3	50	25	2,77	40	3,73	80
CTXXX27	CTXSXX0T	3/4"	20	26,7	58	29	2,87	40	3,91	80
CTXXX33	CTXSXX01	1"	25	33,4	76	38	3,38	40	4,55	80
CTXXX42	CTXSXX1C	1 1/4"	32	42,2	96	48	3,56	40	4,85	80
CTXXX48	CTXSXX1M	1 1/2"	40	48,3	114	57	3,68	40	5,08	80
CTXXX60	CTXSXX02	2"	50	60,3	128	64	3,91	40	5,54	80
CTXXX76	CTXSXX2M	2 1/2"	65	73,0	152	76	5,16	40	7,01	80
CTXXX89	CTXSXX03	3"	80	88,9	172	86	5,49	40	7,62	80
CTXXX114	CTXSXX04	4"	100	114,3	210	105	6,02	40	8,56	80
CTXXX140	CTXSXX05	5"	125	141,3	248	124	6,55	40	9,53	80
CTXXX168	CTXSXX06	6"	150	168,3	286	143	7,11	40	10,97	80
CTXXX219	CTXSXX08	8"	200	219,1	356	178	8,18	40	12,70	80
CTXXX273	----	10"	250	273,0	432	216	9,27	40	12,70	60
CTXXX324	----	12"	300	323,8	508	254	9,53	....	12,70	....
CTXXX355	----	14"	350	355,6	558	279	9,53	30	12,70	....
CTXXX406	----	16"	400	406,4	610	305	9,53	30	12,70	40
CTXXX457	----	18"	450	457,0	686	343	9,53	....	12,70	....
CTXXX508	----	20"	500	508,0	762	381	9,53	20	12,70	30

CAP – STD and XS-



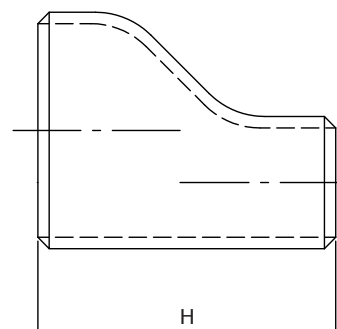
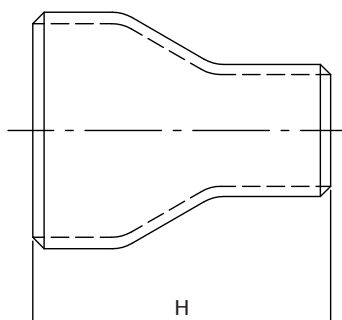
CODE STD	CODE XS	NPS	DN	Outside diameter at bevel (mm)	Length E (mm)	WALL THICKNESS			
						STD (mm)	STD Schedule No.	XS (mm)	XS Schedule No.
CCSTXX0M	CCXSXX0M	1/2"	15	21,3	25	2,77	40	3,73	80
CCSTXX0T	CCXSXX0T	3/4"	20	26,7	25	2,87	40	3,91	80
CCSTXX01	CCXSXX01	1"	25	33,4	38	3,38	40	4,55	80
CCSTXX1C	CCXSXX1C	1 1/4"	32	42,2	38	3,56	40	4,85	80
CCSTXX1M	CCXSXX1M	1 1/2"	40	48,3	38	3,68	40	5,08	80
CCSTXX02	CCXSXX02	2"	50	60,3	38	3,91	40	5,54	80
CCSTXX2M	CCXSXX2M	2 1/2"	65	73,0	38	5,16	40	7,01	80
CCSTXX03	CCXSXX03	3"	80	88,9	51	5,49	40	7,62	80
CCSTXX04	CCXSXX04	4"	100	114,3	64	6,02	40	8,56	80
CCSTXX05	CCXSXX05	5"	125	141,3	76	6,55	40	9,53	80
CCSTXX06	CCXSXX06	6"	150	168,3	89	7,11	40	10,97	80
CCSTXX08	CCXSXX08	8"	200	219,1	102	8,18	40	12,70	80
CCSTXX10	----	10"	250	273,0	127	9,27	40	12,70	60
CCSTXX12	----	12"	300	323,8	152	9,53	....	12,70	....
CCSTXX14	----	14"	350	355,6	165	9,53	30	12,70	....
CCSTXX16	----	16"	400	406,4	178	9,53	30	12,70	40
CCSTXX18	----	18"	450	457,0	203	9,53	....	12,70	....
CCSTXX20	----	20"	500	508,0	229	9,53	20	12,70	30

CONCENTRIC REDUCER – STD and XS – and ECCENTRIC – STD



CODE CONCENTRIC STD	CODE CONCENTRIC XS	CODE ECCENTRIC STD	NPS	DN	Outside diameter at bevel (mm)	WALL THICKNESS				Lenght H (mm)
						STD (mm)	STD Schedule No.	XS (mm)	XS Schedule No.	
CRST0T0M	CRXS0T0M	CREX0T0M	3/4" x 1/2"	20 x 15	26,7 x 21,3	2,87 x 2,77	40	3,91 x 3,73	80	38
CRST010M	CRXS010M	CREX010M	1" x 1/2"	25 x 15	33,4 x 21,3	3,38 x 2,77	40	4,55 x 3,73	80	51
CRST010T	CRXS010T	CREX010T	1" x 3/4"	25 x 20	33,4 x 26,7	3,38 x 2,87	40	4,55 x 3,91	80	51
CRST1C0M	----	CREX1C0M	1 1/4" x 1/2"	32 x 15	42,2 x 21,3	3,56 x 2,77	40	4,85 x 3,73	80	51
CRST1C0T	CRXS1C0T	CREX1C0T	1 1/4" x 3/4"	32 x 20	42,2 x 26,7	3,56 x 2,87	40	4,85 x 3,91	80	51
CRST1C01	CRXS1C01	CREX1C01	1 1/4" x 1"	32 x 25	42,2 x 33,4	3,56 x 3,38	40	4,85 x 4,55	80	51
CRST1M0M	----	CREX1M0M	1 1/2" x 1/2"	40 x 15	48,3 x 21,3	3,68 x 2,77	40	5,08 x 3,73	80	64
CRST1M0T	CRXS1M0T	CREX1M0T	1 1/2" x 3/4"	40 x 20	48,3 x 26,7	3,68 x 2,87	40	5,08 x 3,91	80	64
CRST1M01	CRXS1M01	CREX1M01	1 1/2" x 1"	40 x 25	48,3 x 33,4	3,68 x 3,38	40	5,08 x 4,55	80	64
CRST1M1C	CRXS1M1C	CREX1M1C	1 1/2" x 1 1/4"	40 x 32	48,3 x 42,2	3,68 x 3,56	40	5,08 x 4,85	80	64
CRST020M	----	----	2" x 1/2"	50 x 15	60,3 x 21,3	3,91 x 2,77	40	5,54 x 3,73	80	76
CRST020T	----	CREX020T	2" x 3/4"	50 x 20	60,3 x 26,7	3,91 x 2,87	40	5,54 x 3,91	80	76
CRST0201	CRXS0201	CREX0201	2" x 1"	50 x 25	60,3 x 33,4	3,91 x 3,38	40	5,54 x 4,55	80	76
CRST021C	CRXS021C	CREX021C	2" x 1 1/4"	50 x 32	60,3 x 42,2	3,91 x 3,56	40	5,54 x 4,85	80	76
CRST021M	CRXS021M	CREX021M	2" x 1 1/2"	50 x 40	60,3 x 48,3	3,91 x 3,68	40	5,54 x 5,08	80	76
CRST2M01	----	CREX2M01	2 1/2" x 1"	65 x 25	73,0 x 33,4	5,16 x 3,38	40	7,01 x 4,55	80	89
CRST2M1C	----	CREX2M1C	2 1/2" x 1 1/4"	65 x 32	73,0 x 42,2	5,16 x 3,56	40	7,01 x 4,85	80	89
CRST2M1M	CRXS2M1M	CREX2M1M	2 1/2" x 1 1/2"	65 x 40	73,0 x 48,3	5,16 x 3,68	40	7,01 x 5,08	80	89
CRST2M02	CRXS2M02	CREX2M02	2 1/2" x 2"	65 x 50	73,0 x 60,3	5,16 x 3,91	40	7,01 x 5,54	80	89
CRST0301	----	----	3" x 1"	80 x 25	88,9 x 33,4	5,49 x 3,38	40	7,62 x 4,55	80	89
CRST031C	----	CREX031C	3" x 1 1/4"	80 x 32	88,9 x 42,2	5,49 x 3,56	40	7,62 x 4,85	80	89
CRST031M	----	CREX031M	3" x 1 1/2"	80 x 40	88,9 x 48,3	5,49 x 3,68	40	7,62 x 5,08	80	89
CRST0302	CRXS0302	CREX0302	3" x 2"	80 x 50	88,9 x 60,3	5,49 x 3,91	40	7,62 x 5,54	80	89
CRST032M	CRXS032M	CREX032M	3" x 2 1/2"	80 x 65	88,9 x 73,0	5,49 x 5,16	40	7,62 x 7,01	80	89
CRST041C	----	----	4" x 1 1/4"	100 x 32	114,3 x 42,2	6,02 x 3,56	40	8,56 x 4,85	80	102
CRST041M	----	CREX041M	4" x 1 1/2"	100 x 40	114,3 x 48,3	6,02 x 3,68	40	8,56 x 5,08	80	102
CRST0402	CRXS0402	CREX0402	4" x 2"	100 x 50	114,3 x 60,3	6,02 x 3,91	40	8,56 x 5,54	80	102
CRST042M	CRXS042M	CREX042M	4" x 2 1/2"	100 x 65	114,3 x 73,0	6,02 x 5,16	40	8,56 x 7,01	80	102
CRST0403	CRXS0403	CREX0403	4" x 3"	100 x 80	114,3 x 88,9	6,02 x 5,49	40	8,56 x 7,62	80	102

CONCENTRIC REDUCER – STD and XS – and ECCENTRIC – STD



CODE CONCENTRIC STD	CODE CONCENTRIC XS	CODE ECCENTRIC STD	NPS	DN	Outside diameter at bevel (mm)	WALL THICKNESS				Lenght H (mm)
						STD (mm)	STD Schedule No.	XS (mm)	XS Schedule No.	
CRST0502	----	CREX0502	5" x 2"	125 x 50	141,3 x 60,3	6,55 x 3,91	40	9,53 x 5,54	80	127
CRST052M	----	CREX052M	5" x 2 1/2"	125 x 65	141,3 x 73,0	6,55 x 5,16	40	9,53 x 7,01	80	127
CRST0503	CRXS0503	CREX0503	5" x 3"	125 x 80	141,3 x 88,9	6,55 x 5,49	40	9,53 x 7,62	80	127
CRST0504	CRXS0504	CREX0504	5" x 4"	125 x 100	141,3 x 114,3	6,55 x 6,02	40	9,53 x 8,56	80	127
CRST0602	----	----	6" x 2"	150 x 50	168,3 x 60,3	7,11 x 3,91	40	10,97 x 5,54	80	140
CRST062M	----	CREX062M	6" x 2 1/2"	150 x 65	168,3 x 73,0	7,11 x 5,16	40	10,97 x 7,01	80	140
CRST0603	----	CREX0603	6" x 3"	150 x 80	168,3 x 88,9	7,11 x 5,49	40	10,97 x 7,62	80	140
CRST0604	CRXS0604	CREX0604	6" x 4"	150 x 100	168,3 x 114,3	7,11 x 6,02	40	10,97 x 8,56	80	140
CRST0605	CRXS0605	CREX0605	6" x 5"	150 x 125	168,3 x 141,3	7,11 x 6,55	40	10,97 x 9,53	80	140
CRST0803	----	----	8" x 3"	200 x 80	219,1 x 88,9	8,18 x 5,49	40	12,70 x 7,62	80	152
CRST0804	----	CREX0804	8" x 4"	200 x 100	219,1 x 114,3	8,18 x 6,02	40	12,70 x 8,56	80	152
CRST0805	----	CREX0805	8" x 5"	200 x 125	219,1 x 141,3	8,18 x 6,55	40	12,70 x 9,53	80	152
CRST0806	----	CREX0806	8" x 6"	500 x 150	219,1 x 168,3	8,18 x 7,11	40	12,70 x 10,97	80	152
CRST1004	----	CREX1004	10" x 4"	250 x 100	273,0 x 114,3	9,27 x 6,02	40	12,70 x 8,56	----	178
CRST1005	----	CREX1005	10" x 5"	250 x 125	273,0 x 141,3	9,27 x 6,55	40	12,70 x 9,53	----	178
CRST1006	----	CREX1006	10" x 6"	250 x 150	273,0 x 168,3	9,27 x 7,11	40	12,70 x 10,97	----	178
CRST1008	----	CREX1008	10" x 8"	250 x 200	273,0 x 219,1	9,27 x 8,18	40	12,70 x 12,70	----	178
----	----	----	12" x 5"	300 x 125	323,8 x 141,3	9,53 x 6,55	----	12,70 x 9,53	----	203
CRST1206	----	CREX1206	12" x 6"	300 x 150	323,8 x 168,3	9,53 x 7,11	----	12,70 x 10,97	----	203
CRST1208	----	CREX1208	12" x 8"	300 x 200	323,8 x 219,1	9,53 x 8,18	----	12,70 x 12,70	----	203
CRST1210	----	CREX1210	12" x 10"	300 x 250	323,8 x 273,0	9,53 x 9,27	----	12,70 x 12,70	----	203
----	----	----	14" x 6"	350 x 150	355,6 x 168,3	9,53 x 7,11	----	12,70 x 10,97	----	330
CRST1408	----	CREX1408	14" x 8"	350 x 200	355,6 x 219,1	9,53 x 8,18	----	12,70 x 12,70	----	330
CRST1410	----	CREX1410	14" x 10"	350 x 250	355,6 x 273,0	9,53 x 9,27	----	12,70 x 12,70	----	330
CRST1412	----	CREX1412	14" x 12"	350 x 300	355,6 x 323,8	9,53 x 9,53	----	12,70 x 12,70	----	330
CRST1608	----	CREX1608	16" x 8"	400 x 200	406,4 x 219,1	9,53 x 8,18	----	12,70 x 12,70	----	356
CRST1610	----	CREX1610	16" x 10"	400 x 250	406,4 x 273,0	9,53 x 9,27	----	12,70 x 12,70	----	356
CRST1612	----	CREX1612	16" x 12"	400 x 300	406,4 x 323,8	9,53 x 9,53	----	12,70 x 12,70	----	356
CRST1614	----	CREX1614	16" x 14"	400 x 350	406,4 x 355,6	9,53 x 9,53	----	12,70 x 12,70	----	356

4.3.4. TOLERANCES (ASME B16.9 – ASME B36.10)

The tolerances for the parameters specified are shown in the following table:

TOLERANCES										
DIAMETERS				Center to end distance	TOTAL LENGTH		ALIGNMENT			
90° Elbow Long Radius (LR), Cap, Tee, Concentric Reducer and Eccentric				90° Elbow Long Radius (Lr) and Tee	Reducer	Cap	90° Elbow Long Radius (Lr), Cap, Tee, Concentric Reducer and Eccentric			
NPS	DN	Outside diameter (D) at bevel	Inside diameter at end	A, B, C, M	H	E	NPS	DN	Q (off angle)	P (off plane)
1/2" to 2 1/2"	15 to 65	+ 1,6 / - 0,8	± 0,8	+ 1,6 / - 0,8	± 2	± 3	1/2 to 2 1/2	15 to 100	± 1	± 2
3" to 3 1/2"	80 to 90	± 1,6	± 1,6	± 1,6	± 2	± 3	5 to 8	125 to 200	± 2	± 4
4"	100	± 1,6	± 1,6	± 1,6	± 2	± 3	10 to 12	250 to 300	± 3	± 5
5" to 8"	125 to 200	+ 2,4 / - 1,6	± 1,6	+ 2,4 / - 1,6	± 2	± 6	14 to 16	350 to 400	± 3	± 6
10" to 18"	250 to 450	+ 4,0 / - 3,2	± 3,2	+ 4,0 / - 3,2	± 2	± 6	18 to 24	450 to 600	± 4	± 10
20" to 24"	500 to 600	+ 6,4 / - 4,8	± 4,8	+ 6,4 / - 4,8	± 2	± 6	26 to 30	650 to 750	± 5	± 10
26" to 30"	650 to 750	+ 6,4 / - 4,8	± 4,8	+ 6,4 / - 4,8	± 5	± 10	32 to 42	800 to 1050	± 5	± 13
32" to 48"	800 to 1200	+ 6,4 / - 4,8	± 4,8	+ 6,4 / - 4,8	± 5	± 10	44 to 48	1100 to 1200	± 5	± 19

Note: for the diameters, the permitted ovality is the sum of the absolute values of positive and negative tolerance.

