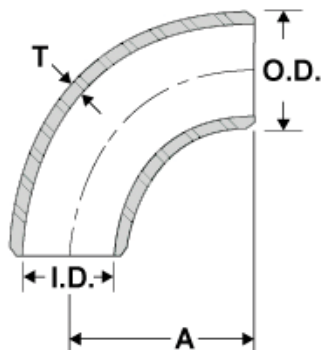




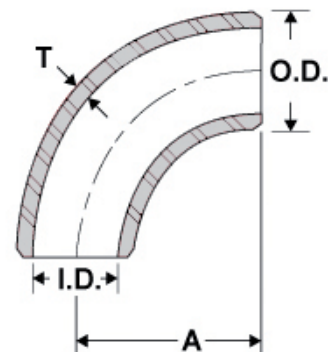
## 90° R L

ANSI B16.9

Espessura Standard



Diâmetro Nominal (DN)	Diâmetro Exterior (O.D.)	Diâmetro Interior (I.D.)	Espessura de Parede (T)	Do Centro ao Fim (A)	Schedule	Peso (Kg)
15	21.3	15.8	2.77	38.1	STD	0.01
20	26.7	20.9	2.87	26.0	STD	0.07
25	33.4	26.6	3.38	38.1	STD	0.2
32	42.2	33.1	3.56	47.6	STD	0.2
40	48.3	40.9	3.68	57.2	STD	0.4
50	60.3	52.5	3.91	76.2	STD	0.7
65	73.0	62.7	5.16	95.3	STD	1.5
80	88.9	77.9	5.49	114.3	STD	2.2
90	101.6	90.1	5.74	133.4	STD	3
100	114.3	102.3	6.02	152.4	STD	4
125	141.3	128.2	6.55	190.5	STD	6.8
150	168.3	154.1	7.11	228.6	STD	10.9
200	219.1	202.7	8.18	304.8	STD	21.7
250	273.0	254.5	9.27	381.0	STD	37.8
300	323.8	304.8	9.53	457.2	STD	55.8
350	355.6	336.5	9.53	533.4	STD	70.3
400	406.4	387.4	9.53	609.6	STD	93.4
450	457.0	438.2	9.53	685.8	STD	118.8
500	508.0	489.0	9.53	762.0	STD	147
600	610.0	590.5	9.53	914.4	STD	211.4
750	762.0	742.9	9.53	1,143.0	STD	326.6
900	914.0	895.3	9.53	1,371.6	STD	471.3
1050	1,067.0	1,047.7	9.53	1,600.2	STD	644.1
1200	1,219.0	1,200.1	9.53	1,828.8	STD	907.2



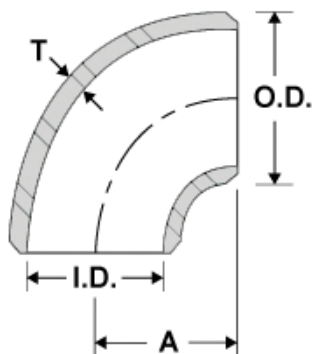
Diâmetro Nominal (DN)	Diâmetro Exterior (O.D.)	Diâmetro Interior (I.D.)	Espessura de Parede (T)	Do Centro ao Fim (A)	Schedule	Peso (Kg)
15	21.3	13.8	3.73	38.1	XS	0.1
20	26.7	18.8	3.91	25.7	XS	0.1
25	33.4	24.3	4.55	38.1	XS	0.2
32	42.2	32.5	4.85	47.6	XS	0.4
40	48.3	38.1	5.08	57.2	XS	0.5
50	60.3	49.3	5.54	76.2	XS	1
65	73.0	59.0	7.01	95.3	XS	1.7
80	88.9	73.7	7.62	114.3	XS	2.9
90	101.6	85.4	8.08	133.3	XS	3.9
100	114.3	97.2	8.56	152.4	XS	5.7
125	141.3	122.3	9.53	190.5	XS	9.6
150	168.3	146.3	10.97	228.6	XS	15.6
200	219.1	193.7	12.70	304.8	XS	32.3
250	273.0	247.7	12.70	381.0	XS	50.3
300	323.8	298.45	12.70	457.2	XS	71.7
350	355.6	330.2	12.70	533.4	XS	91.2
400	406.4	381.0	12.70	609.6	XS	122.5
450	457.0	432.0	12.70	686.0	XS	157.9
500	508.0	483.0	12.70	762.0	XS	191.4
600	610.0	584.2	12.70	914.4	XS	274
750	762.0	737.0	12.70	1,143.0	XS	452.2
900	914.0	889.0	12.70	1,371.6	XS	626
1050	1,067.0	1,041.4	12.70	1,600.2	XS	852.8
1200	1,219.0	1,194.0	12.70	1,829.0	XS	1134.9



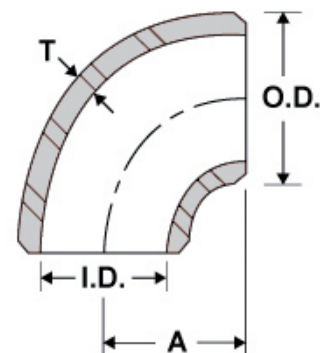
## 90° R C

ANSI B16.9

Espessura Standard



Diâmetro Nominal (DN)	Diâmetro Exterior (O.D.)	Diâmetro Interior (I.D.)	Espessura de Parede (T)	Do Centro Ao Fim (A)	Schedule	Peso (Kg)
25	33.4	26.6	3.38	25	STD	0.1
32	42.2	35.1	3.56	31.8	STD	0.2
40	48.3	40.1	3.68	38.1	STD	0.2
50	60.3	52.5	3.91	51	STD	0.4
65	73.0	62.7	5.16	64	STD	0.9
80	88.9	78.0	5.49	76	STD	1.4
90	101.6	90.1	5.74	89	STD	2
100	114.3	102.3	6.02	102	STD	2.7
125	141.3	128.2	6.55	127	STD	4.4
150	168.3	154.0	7.11	152	STD	7.6
200	219.1	203.0	8.18	203	STD	14.7
250	273.0	254.5	9.53	254	STD	25.5
300	323.8	304.8	9.53	305	STD	36
350	355.6	336.6	9.53	356	STD	47.1
400	406.4	387.4	9.53	406	STD	58.5
450	457.2	438.2	9.53	457	STD	73.9
500	508	489.0	9.53	508	STD	95.2
600	610	590.5	9.53	610	STD	134.7
750	762	742.9	9.53	762	STD	217.7
900	914	895.3	9.53	914	STD	313.9
1050	1067	1047.7	9.53	1067	STD	438.6
1200	1219	1200.1	9.53	1219	STD	607.8



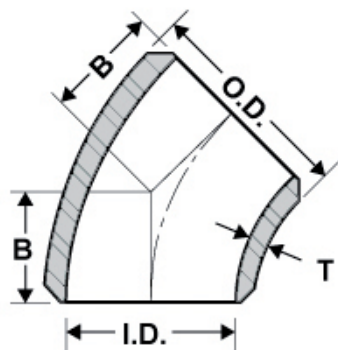
Diâmetro Nominal (DN)	Diâmetro Exterior (O.D.)	Diâmetro Interior (I.D.)	Espessura de Parede (T)	Do Centro ao Fim (A)	Schedule	Peso (Kg)
40	48.3	38.1	5.1	38	XS	0.3
50	60.3	49.3	5.5	51	XS	0.7
65	73.0	59.0	7.0	64	XS	1.2
80	88.9	73.4	7.6	76	XS	1.7
90	101.6	85.4	8.0	89	XS	2.4
100	114.3	97.2	8.5	102	XS	3.4
125	141.3	122.2	9.5	127	XS	6.3
150	168.3	146.3	11.0	152	XS	10.3
200	219.1	194.0	12.7	203	XS	21.5
250	273.0	247.7	12.7	254	XS	32.2
300	323.8	298.5	12.7	305	XS	47.2
350	355.6	330.2	12.7	356	XS	62.1
400	406.4	381.0	12.7	406	XS	77.6
450	457	431.8	12.7	457	XS	97
500	508	482.6	12.7	508	XS	125.6
600	610	584.2	12.7	610	XS	176.9
750	762	737	12.7	762	XS	287.6
900	914	889	12.7	914	XS	414.1
1050	1067	1041.4	12.7	1067	XS	589.7
1200	1219	1194	12.7	1219	XS	759.8



## 45°

ANSI B16.9

Espessura **Standard**

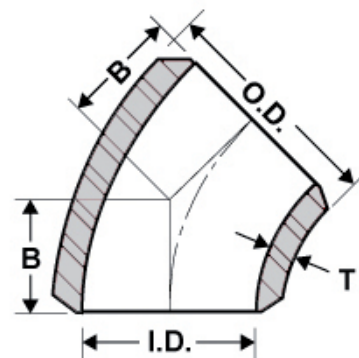


Diâmetro Nominal (DN)	Diâmetro Exterior (O.D.)	Diâmetro Interior (I.D.)	Espessura de Parede (T)	Do Centro ao Fim (A)	Schedule	Peso (Kg)
15	21.3	15.8	2.8	16	STD	0.04
20	26.7	21.0	2.9	19	STD	0.05
25	33.4	26.6	3.4	22	STD	0.09
32	42.2	35.0	3.5	25	STD	0.1
40	48.3	41.0	3.7	29	STD	0.2
50	60.3	53.3	3.9	35	STD	0.4
65	73.0	63.0	5.2	44	STD	0.8
80	88.9	78.0	5.5	51	STD	1.1
90	101.6	90.1	5.7	57	STD	1.5
100	114.3	102.2	6.0	64	STD	2.0
125	141.3	128.2	6.6	79	STD	3.4
150	168.3	154.0	7.1	95	STD	5.3
200	219.1	202.7	8.2	127	STD	10.6
250	273.0	254.5	9.3	159	STD	18.6
300	323.8	305.0	9.5	190	STD	27.9
350	355.6	336.6	9.5	222	STD	35.4
400	406.4	387.4	9.5	254	STD	45.8
450	457	438.2	9.5	286	STD	58.1
500	508	489.0	9.5	318	STD	72.1
600	610	590.1	9.5	381	STD	104.8
750	762	743.0	9.5	470	STD	162.4
900	914	895.4	9.5	565	STD	235.0
1050	1067	1,047.8	9.5	660	STD	320.7
1200	1219	1,200.2	9.5	759	STD	453.6

**45°**

ANSI B16.9

Espessura **XS**



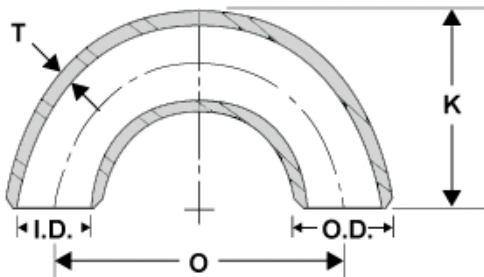
Diâmetro Nominal (DN)	Diâmetro Exterior (O.D.)	Diâmetro Interior (I.D.)	Espessura de Parede (T)	Do Centro ao Fim (A)	Schedule	Peso (Kg)
15	21.3	14.0	3.7	16	XS	0.07
20	26.7	18.9	3.9	19	XS	0.07
25	33.4	24.3	4.5	22	XS	0.1
32	42.2	32.5	4.9	25	XS	0.2
40	48.3	38.1	5.1	29	XS	0.5
50	60.3	49.3	5.5	35	XS	0.5
65	73.0	59.0	7.0	44	XS	0.9
80	88.9	73.7	7.6	51	XS	1.5
90	101.6	85.4	8.0	57	XS	2.0
100	114.3	97.2	8.5	64	XS	2.8
125	141.3	122.3	9.5	79	XS	4.7
150	168.3	146.3	11.0	95	XS	7.7
200	219.1	193.7	12.7	127	XS	15.6
250	273.0	247.7	12.7	159	XS	24.3
300	323.8	298.5	12.7	190	XS	35.2
350	355.6	330.2	12.7	222	XS	45.4
400	406.4	381.0	12.7	254	XS	60.1
450	457	431.8	12.7	286	XS	77.1
500	508	483.0	12.7	318	XS	94.8
600	610	584.2	12.7	381	XS	137.0
750	762	737.7	12.7	470	XS	215.5
900	914	889.0	12.7	565	XS	311.2
1050	1067	1,041.4	12.7	660	XS	424.6
1200	1219	1,193.8	12.7	759	XS	567.0



## 180° RL

ANSI B16.9

Espessura Standard

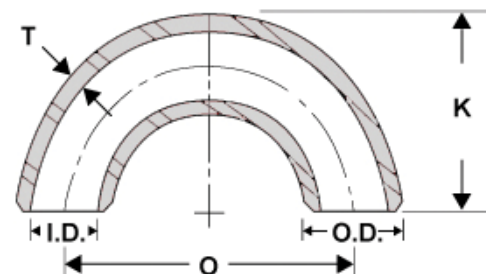


Diâmetro Nominal (DN)	Diâmetro Exterior (O.D.)	Diâmetro Interior (I.D.)	Espessura de Parede (T)	De Centro a Centro (O)	Altura (K)	Schedule	Peso (Kg)
15	21.3	15.8	2.8	76	48	STD	0.1
20	26.7	21.0	2.9	76	51	STD	0.2
25	33.4	26.6	3.4	76	56	STD	0.3
32	42.2	35.0	3.6	95	70	STD	0.5
40	48.3	41.0	3.7	114	83	STD	0.7
50	60.3	52.5	3.9	152	106	STD	1.5
65	73.0	62.7	5.2	190	132	STD	2.8
80	88.9	78.0	5.5	229	159	STD	4.3
90	101.6	90.1	5.7	267	184	STD	5.8
100	114.3	102.2	6.0	305	210	STD	7.9
125	141.3	128.1	6.6	381	262	STD	13.3
150	168.3	154.0	7.1	457	313	STD	21.3
200	219.1	202.7	8.2	610	414	STD	39.5
250	273.0	254.5	9.3	762	518	STD	74.4
300	323.8	305.0	9.5	914	619	STD	107.5
350	355.6	336.5	9.5	1067	711	STD	141.1
400	406.4	387.3	9.5	1219	813	STD	185.1
450	457	438.1	9.5	1372	914	STD	233.2
500	508	489.0	9.5	1524	1016	STD	288.5
600	610	590.5	9.5	1829	1219	STD	411.9

**180° RL**

ANSI B16.9

Espessura **XS**



Diâmetro Nominal (DN)	Diâmetro Exterior (O.D.)	Diâmetro Interior (I.D.)	Espessura de Parede (T)	De Centro a Centro (O)	Altura (K)	Schedule	Peso (Kg)
15	21.3	13.8	3.7	76	48	XS	0.2
20	26.7	18.8	3.9	76	51	XS	0.2
25	33.4	24.3	4.5	76	56	XS	0.4
32	42.2	32.5	4.8	95	70	XS	0.7
40	48.3	38.1	5.1	114	83	XS	1
50	60.3	49.3	5.5	152	106	XS	1.9
65	73.0	59.0	7.0	190	132	XS	3.5
80	88.9	73.6	7.6	229	159	XS	5.6
90	101.6	85.4	8.0	267	184	XS	7.8
100	114.3	97.2	8.5	305	210	XS	10.9
125	141.3	122.2	9.5	381	262	XS	18.9
150	168.3	146.3	10.9	457	313	XS	30.9
200	219.1	193.6	12.7	610	414	XS	63.5
250	273.0	247.6	12.7	762	518	XS	98.4
300	323.8	298.4	12.7	914	619	XS	141.1
350	355.6	330.2	12.7	1067	711	XS	181.4
400	406.4	381.0	12.7	1219	813	XS	244.9
450	457	431.8	12.7	1372	914	XS	311.2
500	508	482.6	12.7	1524	1016	XS	381
600	610	584.2	12.7	1829	1219	XS	548.9

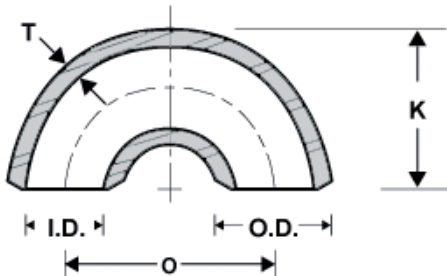




## 180° R C

ANSI B16.9

Espessura Standard

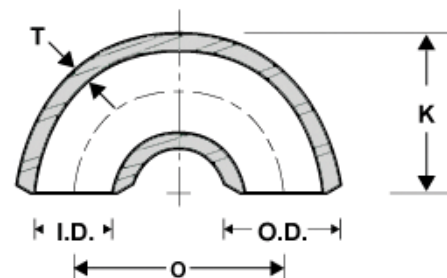


Diâmetro Nominal (DN)	Diâmetro Exterior (O.D.)	Diâmetro Interior (I.D.)	Espessura de Parede (T)	De Centro a Centro (O)	Altura (K)	Schedule	Peso (Kg)
25	33.4	26.6	3.3	51	41	STD	0.2
32	42.2	35.0	3.5	64	52	STD	0.4
40	48.3	40.8	3.6	76	62	STD	0.5
50	60.3	52.5	3.9	102	81	STD	0.9
65	73.0	62.7	5.1	127	100	STD	1.8
80	88.9	77.9	5.4	152	121	STD	2.7
90	101.6	90.1	5.7	178	140	STD	3.9
100	114.3	102.2	6.0	203	159	STD	5.5
125	141.3	128.1	6.5	254	197	STD	8.7
150	168.3	154.0	7.1	305	237	STD	14.9
200	219.1	202.7	8.1	406	313	STD	29.4
250	273.0	254.5	9.2	508	391	STD	50.8
300	323.8	304.8	9.5	610	467	STD	71.2
350	355.6	336.5	9.5	711	533	STD	94.3
400	406.4	387.3	9.5	813	610	STD	116.6
450	457	438.1	9.5	914	686	STD	147.4
500	508	488.9	9.5	1016	762	STD	188.7
600	610	590.5	9.5	1219	914	STD	268.5

**180° R C**

ANSI B16.9

Espessura XS



Diâmetro Nominal (DN)	Diâmetro Exterior (O.D.)	Diâmetro Interior (I.D.)	Espessura de Parede (T)	De Centro a Centro (O)	Altura (K)	Schedule	Peso (Kg)
40	48.3	38.1	5.08	76	62	XS	0.5
50	60.3	49.2	5.54	102	81	XS	0.9
65	73.0	59.0	7.01	127	100	XS	1.8
80	88.9	73.6	7.62	152	121	XS	2.7
90	101.6	85.4	8.08	178	140	XS	3.9
100	114.3	97.1	8.56	203	159	XS	5.5
125	141.3	122.2	9.53	254	197	XS	8.7
150	168.3	146.3	10.97	305	237	XS	14.9
200	219.1	193.6	12.70	406	313	XS	29.4
250	273.0	247.6	12.70	508	391	XS	50.8
300	323.8	298.4	12.70	610	467	XS	71.2
350	355.6	330.2	12.70	711	533	XS	94.3
400	406.4	381.0	12.70	813	610	XS	116.6
450	457	431.8	12.70	914	686	XS	147.4
500	508	482.6	12.70	1016	762	XS	188.7
600	610	584.2	12.70	1219	914	XS	268.5