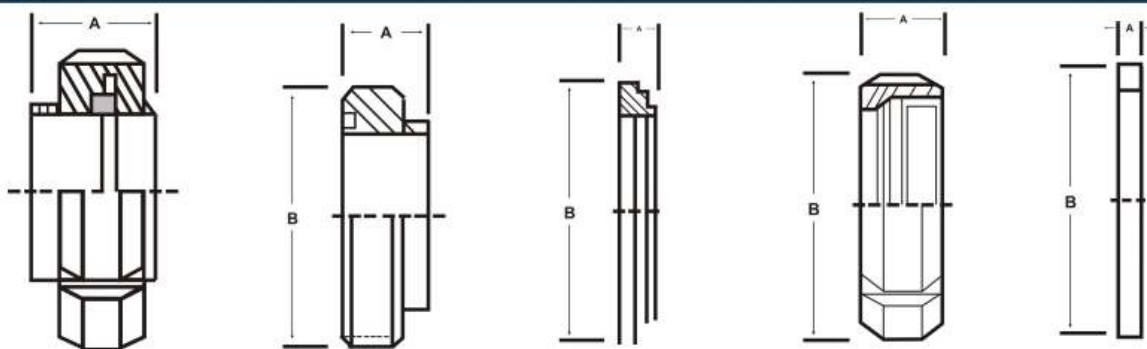
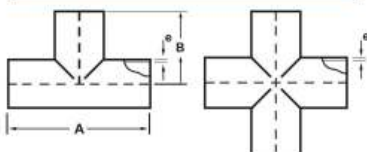


SMS



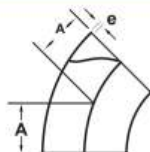
UNIÃO		MACHO		NIPLE		PORCA		VEDAÇÃO	
Ø	A	A	B	A	B	A	B	A	B
1"	32,5	15	40	15,5	35,5	20	51	5,5	35,0
1 1/2"	39,0	20	60	17,0	55,0	25	74	5,5	48,8
2"	39,0	20	70	17,0	65,0	26	84	5,5	61,0
2 1/2"	43,0	24	85	17,0	80,0	30	100	5,5	73,5
3"	44,0	24	98	18,0	93,0	32	114	5,5	86,0
4"	57,0	35	132	20,0	127,0	45	154	5,5	114,0

"T" reto solda / Cruzeta solda



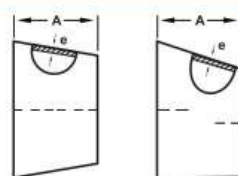
Bitola	A	B	e
1"	76,2	38,1	1,5
1 1/2"	114,3	57,2	1,5
2"	152,4	76,2	1,5
2 1/2"	154,0	77,0	2,0
3"	166,0	83,0	2,0
4"	197,0	98,5	2,0
5"	308,4	154,2	2,0
6"	370,0	185,0	2,0

Curva 45° solda



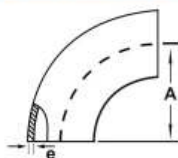
Bitola	A	e
1"	14,6	1,5
1 1/2"	21,9	1,5
2"	29,2	1,5
2 1/2"	36,5	2,0
3"	43,7	2,0
4"	58,3	2,0
6"	87,5	3,0

Redução cônica solda



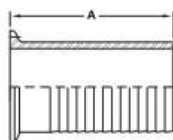
Bitola	CONC./EXC.		CONC./EXC.	
	A	e	Bitola	e
1 1/2" x 1"	39,0	2,0	3" x 2"	2,0
2" x 1"	78,0	2,0	3" x 2 1/2"	2,0
2" x 1 1/2"	39,0	2,0	4" x 1"	2,0
2 1/2" x 1"	117,0	2,0	4" x 1 1/2"	2,0
2 1/2" x 1 1/2"	78,0	2,0	4" x 2"	2,0
2 1/2" x 2"	39,0	2,0	4" x 2 1/2"	2,0
3" x 1"	156,0	2,0	4" x 3"	2,0
3" x 1 1/2"	117,0	2,0		

Curva 90° solda



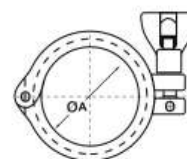
BITOLA	A	e
1"	38,1	1,5
1 1/2"	57,2	1,5
2"	76,2	1,5
2 1/2"	95,3	2,0
3"	114,3	2,0
4"	152,4	2,0
6"	228,6	3,0

Niple adaptador TC x Mangueira



Bitola	A
1"	73,0
1 1/2"	93,0
2"	93,0
2 1/2"	113,0
3"	113,0
4"	116,0
6"	142,0

Abraçadeira TC



Bitola	pressão de normal serviço	
	Ø	(Kgf/cm²)
1/2"	30,2	40,0
3/4"	30,2	40,0
1"	54,0	34,0
1 1/2"	54,0	34,0
2"	67,0	28,0
2 1/2"	81,0	26,0
3"	94,0	22,0
4"	122,0	12,0
6"	172,0	8,0

Barras de aço inoxidável (peso por metro)

Pol	mm	●	●	■	Pol	mm	●	●	■	Pol	mm	●	●	■
1/8"	3,17	0,062	0,068	0,079	2"	50,80	15,90	17,53	20,24	5,1/2"	139,71	120,20	132,73	154,20
5/32"	3,97	0,097	0,107	0,120	2,1/16"	52,39	16,91	18,64	21,52	5,3/4"	146,06	131,40	145,07	168,53
3/16"	4,76	0,149	0,154	0,178	2,1/8"	53,97	17,95	19,79	22,85	6"	152,40	143,10	157,93	183,48
7/32"	5,55	0,189	0,209	0,242	2,3/16"	55,56	19,02	20,97	24,21	6,1/4"	158,76	155,20	171,39	199,12
1/4"	6,35	0,250	0,270	0,320	2,1/4"	57,15	20,12	22,19	25,62	6,1/2"	165,11	167,90	185,38	215,36
9/32"	7,14	0,314	0,346	0,400	2,5/16"	58,73	21,25	23,44	27,06	6,3/4"	171,46	181,10	199,941	232,25
5/16"	7,93	0,390	0,430	0,490	2,3/8"	60,33	22,42	24,72	28,54	7"	177,81	194,70	214,99	249,77
3/8"	9,53	0,560	0,620	0,710	2,7/16"	61,91	23,61	26,03	30,60	7,1/4"	184,16	209,70	230,62	267,93
7/16"	11,11	0,760	0,840	0,970	2,1/2"	63,50	24,84	27,38	31,62	7,1/2"	190,51	223,80	246,80	286,72
1/2"	12,70	0,990	1,100	1,270	2,5/8"	66,68	27,38	30,19	34,87	7,3/4"	196,85	238,90	263,50	306,12
9/16"	14,28	1,260	1,390	1,600	2,3/4"	69,85	30,05	33,14	38,27	8"	203,20	254,60	280,77	326,12
5/8"	15,87	1,550	1,710	1,980	2,7/8"	73,03	32,05	36,22	41,82	8,1/4"	209,55	270,70	298,59	346,90
11/16"	17,46	1,880	2,070	2,390	3"	76,20	35,77	39,43	45,54	8,1/2"	215,90	287,40	316,97	368,20
3/4"	19,05	2,240	2,460	2,850	3,1/8"	79,30	38,81	42,79	49,41	8,3/4"	222,25	304,60	335,88	390,22
13/16"	20,63	2,620	2,890	3,340	3,1/4"	82,55	41,88	46,34	53,44	9"	228,60	322,10	355,35	412,84
7/8"	22,22	3,040	3,350	3,870	3,3/8"	85,73	45,27	49,98	57,63	9,1/4"	234,95	340,30	375,37	436,09
15/16"	23,81	3,490	3,850	4,400	3,1/2"	88,90	48,68	53,74	61,98	9,1/2"	241,30	359,00	395,93	459,98
1"	25,40	3,970	4,380	5,060	3,5/8"	92,08	52,22	57,66	66,49	9,3/4"	247,65	378,10	417,05	484,51
1.1/16"	26,97	4,490	4,950	5,710	3,3/4"	95,25	55,88	61,69	71,15	10"	254,00	397,80	438,71	509,67
1.1/8"	28,57	5,030	5,550	6,400	3,7/8"	98,43	60,67	65,88	75,96	10,1/2"	260,35	417,20	458,66	531,92
1.3/16"	30,16	5,600	6,180	7,140	4"	101,60	63,58	70,26	80,97	11"	266,70	437,10	479,61	554,17
1.1/4"	31,75	6,210	6,850	7,910	4,1/8"	104,78	67,62	74,65	86,10	11,1/2"	272,70	457,00	500,56	576,42
1.5/16"	33,34	6,850	7,550	8,720	4,1/4"	107,95	71,78	79,24	91,39	12"	278,70	476,90	511,51	598,67
1.3/8"	34,92	7,510	8,290	9,570	4,3/8"	111,13	76,06	83,98	96,85	13"	284,70	496,80	522,46	620,92
1.7/16"	36,51	8,210	9,060	10,460	4,1/2"	114,30	80,47	88,84	102,46	14"	290,70	516,70	533,41	643,17
1.1/2"	38,10	8,940	9,860	11,390	4,5/8"	117,48	85,01	93,85	108,23	15"	296,70	536,60	544,36	665,42
1.9/16"	39,69	9,700	10,700	12,350	4,3/4"	120,65	89,66	98,98	114,16	16"	302,70	556,50	555,31	687,67
1.5/8"	41,27	10,490	11,570	13,360	4,7/8"	123,83	94,44	104,27	120,25	17"	308,70	576,40	566,26	709,92
1.3/4"	42,86	11,280	12,420	14,430	5"	127,00	99,80	109,68	126,50	18"	314,70	596,30	577,21	732,17
1.7/8"	44,45	12,170	13,420	15,500	5,1/4"	130,17	105,16	115,14	132,50	19"	320,70	616,20	588,16	754,42
1.9/8"	46,04	13,120	14,470	16,640	5,3/4"	133,34	110,52	120,50	138,50	20"	326,70	636,10	599,11	776,67

Tubos Schedule

Espessura da parede (mm) e Peso por Metro (Kg/m)											
Diâmetro		SCH 05s		SCH 10s		SCH 40s		SCH 80s		SCH 160s	
Nominal	Externo	Parede	Peso	Parede	Peso	Parede	Peso	Parede	Peso	Parede	Peso
1/8"	10,29	-	-	1,24	0,28	1,73	0,37	2,41	0,47	-	-
1/4"	13,72	-	-	1,65	0,49	2,24	0,63	3,02	0,80	3,30	0,82
3/8"	17,15	-	-	1,65	0,63	2,31	0,85	3,20	1,10	4,75	1,56
1/2"	21,34	1,65	0,80	2,11	1,00	2,77	1,27	3,73	1,62	4,78	1,95
3/4"	26,67	1,65	1,02	2,11	1,28	2,87	1,68	3,91	2,19	5,56	2,89
1"	33,40	1,65	1,29	2,77	2,09	3,38	2,50	4,55	3,24	6,36	4,23
1,1/4"	42,16	1,65	1,65	2,77	2,69	3,56	3,39	4,85	4,46	6,35	5,60
1,1/2"	48,26	1,65	1,90	2,77	3,11	3,68	4,05	5,08	5,41	7,14	7,23
2"	60,33	1,65	2,39	2,77	3,93	3,91	5,44	5,54	7,48	8,74	11,10
2,1/2"	73,03	2,11	3,69	3,05	5,26	5,16	8,64	7,01	11,41	9,52	14,90
3"	88,90	2,11	4,52	3,05	6,46	5,49	11,29	7,62	15,27	11,13	21,31
3,1/2"	101,60	2,11	5,18	3,05	7,41	5,74	13,57	8,08	18,63	-	-
4"	114,30	2,11	5,84	3,05	8,37	6,02	16,07	8,56	22,32	13,49	33,49
5"	141,30	2,77	9,46	3,40	11,56	6,55	21,76	9,53	30,97	15,88	49,01
6"	168,28	2,77	11,31	3,40	13,82	7,11	28,26	10,97	42,55	128,26	67,48
8"	219,08	2,77	14,78	3,78	19,96	8,18	42,54	12,70	64,63	23,01	111,14
10"	273,05	3,40	22,61	4,19	27,78	9,27	60,30	12,70	81,53	28,57	172,07
12"	323,85	3,96	31,24	4,57	35,98	9,53	73,87	12,70	97,44	33,32	238,49
14"	355,60	3,96	34,90	4,78	41,25	9,53	81,21	12,70	107,29	35,71	281,43
16"	406,40	4,19	41,56	4,78	47,25	9,53	93,13	12,70	123,18	40,49	364,99
18"	457,20	4,19	47,50	4,78	53,22	9,53	105,06	12,70	139,08	45,24	459,13
20"	508,00	4,78	60,20	5,54	68,55	9,53	116,98	12,70	154,97	50,01	564,30
22"	559,00	4,78	65,24	5,54	75,53	-	-	-	-	-	-
24"	609,60	5,54	83,90	6,35	94,37	9,53	140,82	12,70	186,76	59,54	806,83
30"	762,00	6,35	118,31	7,92	147,36	9,53	176,58	12,70	234,44	-	-
36"	914,40	-	-	-	-	9,53	212,34	12,70	282,13	-	-



Barras Chatas de Aço Inoxidável (peso por metro)

LARGURA	ESPESSURAS - PESO ESTIMADOS POR METRO								
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"
1/2"	0,320	0,470	0,630	0,790	-	-	-	-	-
5/8"	0,400	0,590	0,790	0,990	1,190	-	-	-	-
3/4"	0,470	0,710	0,950	1,185	1,420	1,900	-	-	-
7/8"	0,550	0,830	1,110	1,383	1,660	2,210	-	-	-
1"	0,630	0,950	1,270	1,581	1,900	2,530	3,160	3,790	-
1.1/4"	0,790	1,190	1,580	1,978	2,370	3,160	3,950	4,740	6,320
1.1/2"	0,950	1,430	1,900	2,371	2,850	3,790	4,740	5,690	7,590
1.3/4"	1,110	1,660	2,220	2,767	3,320	4,430	5,540	6,640	8,860
2"	1,270	1,900	2,530	3,170	3,800	5,060	6,330	7,590	10,120
2.1/4"	1,420	2,130	2,850	3,570	4,270	5,690	7,120	8,540	11,390
2.1/2"	1,580	2,370	3,160	3,950	4,740	6,330	7,910	9,490	12,650
2.3/4"	1,740	2,610	3,480	4,350	5,220	6,960	8,700	10,440	13,920
3"	1,900	2,850	3,800	4,750	5,700	7,600	9,490	11,390	15,180
3.1/4"	2,050	3,080	4,110	5,140	6,170	8,220	10,280	12,330	16,440
3.1/2"	2,210	3,320	4,420	5,530	6,640	8,860	11,070	13,280	17,710
3.3/4"	2,370	3,560	4,740	5,930	7,120	9,490	11,860	14,230	18,970
4"	2,540	3,800	5,060	6,330	7,590	10,120	12,650	15,180	20,240
4.1/4"	2,652	4,030	5,380	6,710	8,075	10,760	13,440	16,140	21,500
4.1/2"	2,850	4,270	5,690	7,110	8,540	11,390	14,230	17,080	22,770
5"	3,170	4,750	6,330	7,910	9,490	12,650	15,810	18,980	25,300
5.1/2"	3,480	5,220	6,960	8,700	10,440	13,920	17,390	20,870	27,830
6"	3,790	5,690	7,500	9,490	11,390	15,180	18,970	22,770	30,306

Chapas de aço inoxidáveis

Espessuras			Dimensões - Pesos estimados p/ metro						
Nacionais mm	Polegadas	Nº U.S.G	Kgs/m² Kgs	2m x 1 Kgs	2m x 1,20 Kgs	3m x 1 Kgs	3m x 1,20 Kgs	3m x 1,5 Kgs	6m x 1,5 Kgs
0,30	-	30	2,47	4,9	5,9	7,4	8,9	11,1	22,2
0,40	1/64"	28	3,30	6,6	7,9	9,9	11,9	14,8	29,6
0,50	-	26	4,12	8,2	9,9	12,8	14,8	18,5	37,0
0,60	-	24	4,94	9,9	11,9	14,8	17,8	22,2	44,4
0,80	1/32"	22	6,59	13,2	15,8	19,8	23,7	29,6	59,2
1,00	-	20	8,24	16,5	19,8	24,7	29,7	37,1	74,2
1,20	-	18	9,89	19,8	23,7	29,7	35,6	44,5	89,0
1,50	1/16"	16	12,36	24,7	29,7	37,1	44,5	55,6	111,2
2,00	5/64"	14	16,48	33,0	39,6	49,4	59,3	74,2	148,4
2,50	-	13	20,60	41,2	49,4	61,8	74,2	92,7	185,4
2,75	7/64"	12	22,66	45,3	54,4	68,0	81,6	102,0	204,0
3,00	1/8"	11	24,72	49,4	59,3	74,2	89,0	111,2	222,4
3,50	9/64"	10	28,84	57,7	69,2	86,5	103,8	129,8	259,6
4,00	5/32"	9	32,96	65,9	79,1	98,9	118,7	148,3	296,6
4,50	11/64"	8	37,08	74,2	89,0	111,2	133,5	166,8	333,6
4,76	3/16"	7	39,22	78,4	94,1	117,7	141,2	176,5	353,0
5,00	-	6	41,20	82,4	98,9	123,6	148,3	185,4	370,8
5,50	7/32"	5	45,32	90,6	108,8	136,0	163,2	203,9	407,8
6,00	-	4	49,44	98,9	118,7	148,3	178,0	222,5	445,0
6,35	1/4"	3	52,32	104,6	125,6	157,0	188,4	235,4	470,8
7,93	5/16"	0	65,34	130,7	156,8	196,0	235,2	294,0	588,0
10,00	3/8"	-	82,40	164,8	197,8	247,2	296,6	370,8	741,6
12,70	1/2"	-	104,65	209,3	251,2	313,9	376,7	470,9	941,8
16,00	5/8"	-	131,84	263,7	316,4	395,5	474,6	593,3	1.186,6
19,00	3/4"	-	156,56	313,1	375,7	469,7	563,6	704,5	1.409,0
22,00	7/8"	-	181,28	362,6	435,1	543,8	652,6	815,7	1.631,4
25,40	1"	-	209,30	418,6	502,3	627,9	753,5	941,8	1.883,6
32,00	1,1/4"	-	263,68	527,4	632,8	791,0	949,2	1.186,5	2.373,0
38,10	1,1/2"	-	313,94	627,9	753,5	941,8	1.130,2	1.412,7	2.825,4
45,00	1,3/4"	-	370,80	741,6	889,9	1.112,4	1.334,9	1.668,6	3.337,2
50,80	2"	-	418,59	873,3	1.004,6	1.255,8	1.506,9	1.883,6	3.767,2
65,00	2,9/16"	-	535,60	1.071,2	1.285,4	1.606,8	1.928,2	2.410,2	4.820,4
70,00	2,3/4"	-	576,80	1.153,6	1.384,3	1.730,4	2.076,5	2.595,6	5.191,2
90,00	3,1/2"	-	741,60	1.483,2	1.779,8	2.224,8	2.669,8	3.337,2	6.674,4
101,60	4"	-	837,18	1.674,4	2.009,2	2.511,6	3.013,9	3.767,3	7.534,6

Tubos OD

Diâmetro Externo		Espessura da parede (mm) e Peso por Metro (Kg/m)					
Polegada	mm	1,00	1,20	1,50	2,00	2,50	3,00
1 / 2"	12,70	0,290	0,340	0,410	-	-	-
5/8"	15,87	0,374	0,442	0,539	0,694	-	-
3/4"	19,05	0,450	0,530	0,650	0,840	-	-
7/8"	22,2	0,533	0,634	0,780	1,015	-	-
1"	25,40	0,600	0,720	0,880	1,150	1,41	1,68
1.1/4"	31,75	0,760	0,900	1,120	1,470	1,80	2,16
1.1/2"	38,10	0,910	1,090	1,350	1,780	2,19	2,60
2"	50,80	1,230	1,470	1,820	2,410	2,98	3,54
2.1/2"	63,50	1,540	1,840	2,290	3,030	3,76	4,48
3"	76,20	1,850	2,220	2,760	3,660	4,54	5,42
4"	101,60	-	2,970	3,700	4,910	6,11	7,29
5"	127,00	-	-	4,790	6,160	7,68	9,17
6"	152,40	-	-	5,750	7,420	9,24	11,05
8"	203,20	-	-	-	9,920	12,37	14,81
10"	254,00	-	-	-	12,430	15,50	18,57
12"	304,80	-	-	-	14,930	18,64	22,33

Cantoneiras (peso por metro)

Designação	Peso
3/4" x 3/4" x 1/8	0,867
3/4" x 3/4" x 1/16	1,211
7/8" x 7/8" x 1/8	1,023
7/8" x 7/8" x 3/16	1,579
1" x 1" x 1/8	1,183
1" x 1" x 3/16	1,717
1" x 1" x 1/4	2,209
1 1/4" x 1 1/4" x 1/8	1,496
1 1/4" x 1 1/4" x 3/16	2,189
1 1/4" x 1 1/4" x 1/4	2,480
1 1/2" x 1 1/2" x 1/8	1,812
1 1/2" x 1 1/2" x 3/16	2,662
1 1/2" x 1 1/2" x 1/4	3,480
2" x 2" x 1/8	2,442
2" x 2" x 3/16	3,597
2" x 2" x 1/4	4,717
2" x 2" x 3/8	6,990
2 1/2" x 2 1/2" x 3/16	4,453
2 1/2" x 2 1/2" x 1/4	6,003
2 1/2" x 2 1/2" x 3/8	8,780
3" x 3" x 3/16	5,516
3" x 3" x 1/4	7,280
3" x 3" x 3/8	10,670
3" x 3" x 1/2	13,900
4" x 4" x 1/4	9,680
4" x 4" x 3/8	19,050