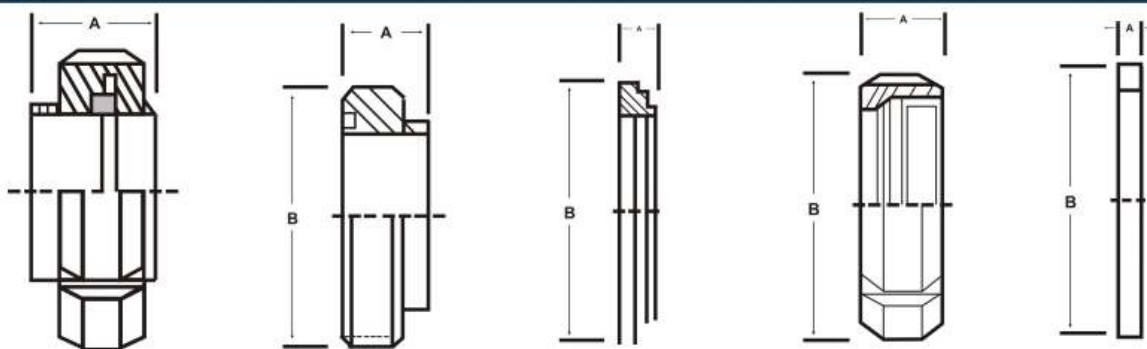
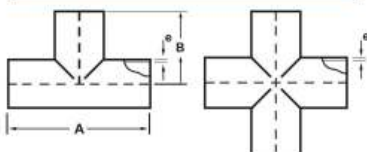


## SMS



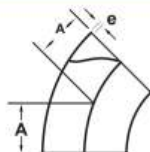
UNIÃO		MACHO		NIPLE		PORCA		VEDAÇÃO	
Ø	A	A	B	A	B	A	B	A	B
1"	32,5	15	40	15,5	35,5	20	51	5,5	35,0
1 1/2"	39,0	20	60	17,0	55,0	25	74	5,5	48,8
2"	39,0	20	70	17,0	65,0	26	84	5,5	61,0
2 1/2"	43,0	24	85	17,0	80,0	30	100	5,5	73,5
3"	44,0	24	98	18,0	93,0	32	114	5,5	86,0
4"	57,0	35	132	20,0	127,0	45	154	5,5	114,0

### "T" reto solda / Cruzeta solda



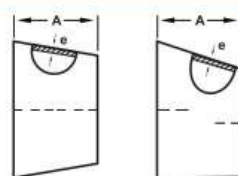
Bitola	A	B	e
1"	76,2	38,1	1,5
1 1/2"	114,3	57,2	1,5
2"	152,4	76,2	1,5
2 1/2"	154,0	77,0	2,0
3"	166,0	83,0	2,0
4"	197,0	98,5	2,0
5"	308,4	154,2	2,0
6"	370,0	185,0	2,0

### Curva 45° solda



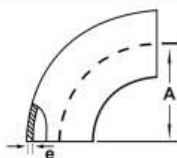
Bitola	A	e
1"	14,6	1,5
1 1/2"	21,9	1,5
2"	29,2	1,5
2 1/2"	36,5	2,0
3"	43,7	2,0
4"	58,3	2,0
6"	87,5	3,0

### Redução cônica solda



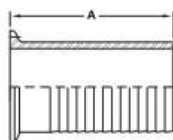
Bitola	CONC./EXC.		CONC./EXC.	
	A	e	Bitola	e
1 1/2" x 1"	39,0	2,0	3" x 2"	78,0 2,0
2" x 1"	78,0	2,0	3" x 2 1/2"	39,0 2,0
2" x 1 1/2"	39,0	2,0	4" x 1"	234,0 2,0
2 1/2" x 1"	117,0	2,0	4" x 1 1/2"	195,0 2,0
2 1/2" x 1 1/2"	78,0	2,0	4" x 2"	156,0 2,0
2 1/2" x 2"	39,0	2,0	4" x 2 1/2"	117,0 2,0
3" x 1"	156,0	2,0	4" x 3"	78,0 2,0
3" x 1 1/2"	117,0	2,0		

### Curva 90° solda



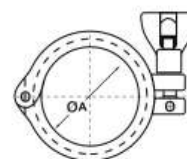
BITOLA	A	e
1"	38,1	1,5
1 1/2"	57,2	1,5
2"	76,2	1,5
2 1/2"	95,3	2,0
3"	114,3	2,0
4"	152,4	2,0
6"	228,6	3,0

### 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	/,3/4"	222,25	204,60	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	259,00	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	76,82	10,1/2"	260,35	438,50	483,67	561,92
1.3/16"	30,16	5,600	6,180	7,140	4"	101,60	63,58	70,26	80,97	11"	266,70	481,20	530,83	616,71
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	526,00	582,58	676,82
1.5/16"	33,34	6,850	7,550	8,720	4,1/4"	107,95	71,78	79,24	91,39	12"	279,40	572,70	631,74	733,93
1.3/8"	34,92	7,510	8,290	9,570	4,3/8"	111,13	76,06	83,98	96,85	13"	286,70	622,60	684,42	801,35
1.7/16"	36,51	8,210	9,060	10,460	4,1/2"	114,30	80,47	88,84	102,46	14"	294,70	677,70	741,87	871,96
1.1/2"	38,10	8,940	9,860	11,390	4,5/8"	117,48	85,01	93,85	108,23	15"	303,00	737,90	807,09	946,77
1.9/16"	39,69	9,700	10,700	12,350	4,3/4"	120,65	89,66	98,98	114,16	16"	311,70	799,30	874,09	1021,77
1.5/8"	41,27	10,490	11,570	13,360	4,7/8"	123,83	94,44	104,27	120,25	17"	320,90	862,50	941,87	1101,96
1.3/4"	42,86	11,300	12,420	14,440	5"	127,00	99,80	109,68	126,50	18"	330,70	931,70	1015,42	1187,35
1.7/8"	44,45	12,170	13,420	15,500	5,1/4"	130,17	105,50	115,94	132,50	19"	341,10	1006,50	1094,83	1278,70

## Tabos 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"	27305	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