

Fittings & Flanges for 10 - 25 Bar Pipe Series 2400

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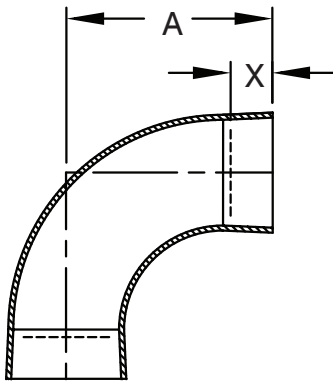
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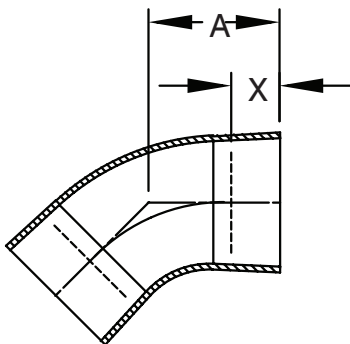
10 Bar Fittings

90° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	137	50	0.6
80	3	176	50	1.1
100	4	205	50	2.1
150	6	290	50	4.2
200	8	395	80	8.6
250	10	471	80	14.2
300	12	543	80	21.0
350	14	444	80	30.0
400	16	512	110	35.0
450	18	582	110	49.0
500	20	633	110	72.0
600	24	735	110	112.0
700	28	866	140	123.0
750	30	917	140	196.0
800	32	998	170	252.0
900	36	1129	200	348.0
1000	40	1231	200	480.0

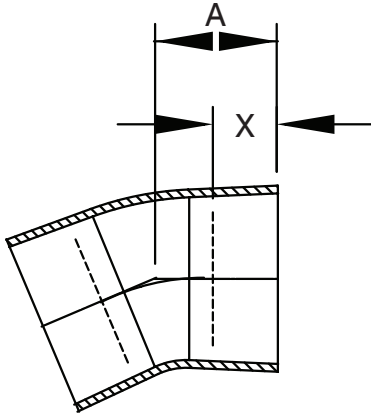
45° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	95	50	0.5
80	3	111	50	0.9
100	4	123	50	1.3
150	6	156	50	2.5
200	8	217	80	6.9
250	10	249	80	9.8
300	12	276	80	18.1
350	14	205	80	19.1
400	16	252	110	21.0
450	18	314	110	31.0
500	20	335	110	42.0
600	24	378	110	63.0
700	28	450	140	90.0
750	30	471	140	107.0
800	32	522	170	139.0
900	36	594	200	193.0
1000	40	636	200	257.0

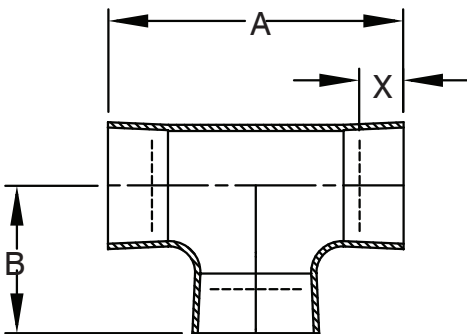
10 Bar Fittings

22½° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	79	50	0.4
80	3	87	50	0.6
100	4	93	50	0.9
150	6	110	50	1.4
200	8	156	80	4.6
250	10	148	80	6.0
300	12	157	80	8.9
350	14	151	80	12.5
400	16	195	110	13.6
450	18	216	110	19.7
500	20	226	110	24.0
600	24	246	110	45.0
700	28	297	140	60.0
750	30	307	140	70.0
800	32	347	170	94.0
900	36	397	200	137.0
1000	40	417	200	153.0

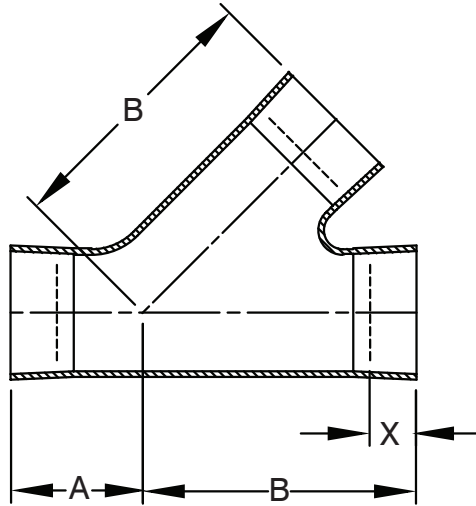
Tees



Nominal Pipe Size		A	B	X	Wgt.
mm	in	mm	mm	mm	kg
50	2	248	124	50	1.3
80	3	292	146	50	2.9
100	4	330	165	50	4.0
150	6	406	203	50	8.7
200	8	536	268	80	17.5
250	10	612	306	80	25.0
300	12	688	344	80	44.0
350	14	704	352	80	47.0
400	16	810	405	110	56.0
450	18	898	449	110	67.0
500	20	960	480	110	99.0
600	24	1088	544	110	130.0
700	28	1279	637	140	240.0
750	30	1326	663	140	285.0
800	32	1458	729	170	363.0
900	36	1648	824	200	518.0
1000	40	1782	891	200	683.0

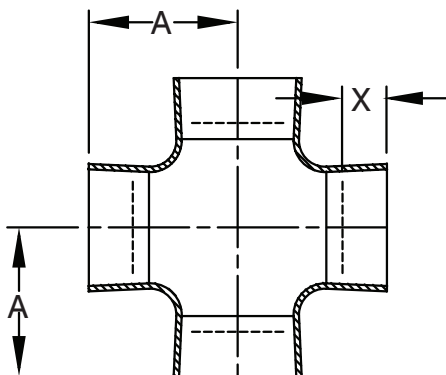
10 Bar Fittings

Lateral 45°



Nominal Pipe Size		A	B	X	Wgt.
mm	in	mm	mm	mm	kg
50	2	124	259	50	2.3
80	3	136	314	50	4.1
100	4	136	365	50	6.3
150	6	149	428	50	12.3
200	8	204	535	80	27.0
250	10	217	611	80	43.0
300	12	230	712	80	52.0
350	14	230	712	80	69.0
400	16	260	742	110	95.0

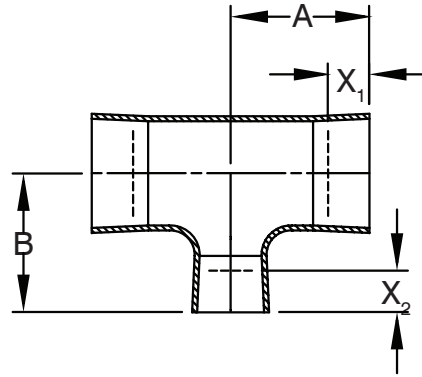
Cross



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	124	50	1.9
80	3	146	50	3.3
100	4	165	50	5.7
150	6	203	50	13.2
200	8	268	80	21.0
250	10	306	80	37.0
300	12	344	80	58.0
350	14	352	80	68.0
400	16	405	110	105.0

10 Bar Fittings

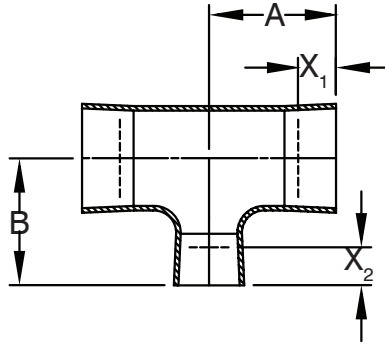
Reducing Tees



Nominal Pipe Size		A	X ₁	B	X ₂	Wgt.
mm	in	mm	mm	mm	mm	kg
80x80x50	3x3x2	146	50	136	50	2.7
100x100x50	4x4x2	165	50	149	50	3.8
100x100x80	4x4x3	165	50	158	50	4.0
150x150x50	6x6x2	203	50	174	50	8.0
150x150x80	6x6x3	203	50	184	50	9.6
150x150x100	6x6x4	203	50	190	50	9.6
200x200x80	8x8x3	268	80	209	50	15.6
200x200x100	8x8x4	268	80	222	50	16.2
200x200x150	8x8x6	268	80	228	50	17.0
250x250x100	10x10x4	306	80	244	50	23.0
250x250x150	10x10x6	306	80	254	50	24.0
250x250x200	10x10x8	306	80	293	80	26.0
300x300x100	12x12x4	344	80	266	50	32.0
300x300x150	12x12x6	344	80	279	50	32.0
300x300x200	12x12x8	344	80	319	80	33.0
300x300x250	12x12x10	344	80	331	80	34.0
350x350x150	14x14x6	352	80	304	50	34.0
350x350x200	14x14x8	352	80	344	80	35.0
350x350x250	14x14x10	352	80	357	80	38.0
350x350x300	14x14x12	352	80	369	80	39.0
400x400x150	16x16x6	405	110	324	50	47.0
400x400x200	16x16x8	405	110	363	80	51.0
400x400x250	16x16x10	405	110	373	80	47.0
400x400x300	16x16x12	405	110	385	80	53.0
400x400x350	16x16x14	405	110	395	80	54.0
450x450x200	18x18x10	449	110	396	80	66.0
450x450x250	18x18x12	449	110	409	80	66.0
450x450x300	18x18x12	449	110	409	80	71.0
450x450x350	18x18x14	449	110	410	80	72.0
450x450x400	18x18x16	449	110	440	110	75.0
500x500x250	20x20x10	480	110	435	80	93.0
500x500x300	20x20x12	480	110	435	80	96.0
500x500x350	20x20x14	480	110	436	80	97.0
500x500x400	20x20x16	480	110	466	110	107.0
500x500x450	20x20x18	480	110	475	110	102.0
600x600x300	24x24x12	544	110	485	80	112.0

10 Bar Fittings

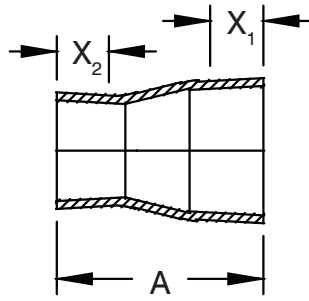
Reducing Tees (cont.)



Nominal Pipe Size		A	X ₁	B	X ₂	Wgt.
mm	in	mm	mm	mm	mm	kg
600x600x350	24x24x14	544	110	486	80	123.0
600x600x400	24x24x16	544	110	516	110	126.0
600x600x450	24x24x18	544	110	538	110	130.0
600x600x500	24x24x20	544	110	540	110	137.0
700x700x350	28x28x14	637	140	555	80	202
700x700x400	28x28x16	637	140	593	110	207
700x700x450	28x28x18	637	140	593	110	209
700x700x500	28x28x20	637	140	601	110	212
700x700x600	28x28x24	637	140	601	110	217
750x750x400	30x30x16	663	140	611	110	245
750x750x450	30x30x18	663	140	619	110	247
750x750x500	30x30x20	663	140	619	110	250
750x750x600	30x30x24	663	140	627	110	256
750x750x700	30x30x28	663	140	657	140	268
800x800x400	32x32x16	729	170	647	110	303
800x800x450	32x32x18	729	170	647	110	306
800x800x500	32x32x20	729	170	655	110	309
800x800x600	32x32x24	729	170	655	110	315
800x800x700	32x32x28	729	170	693	140	329
800x800x750	32x32x30	729	170	693	140	332
900x900x450	36x36x18	824	200	713	110	427
900x900x500	36x36x20	824	200	713	110	430
900x900x600	36x36x24	824	200	721	110	437
900x900x700	36x36x28	824	200	751	140	452
900x900x750	36x36x30	824	200	758	140	458
900x900x800	36x36x32	824	200	788	170	468
1000x1000x500	40x40x20	891	200	779	110	570
1000x1000x600	40x40x24	891	200	779	110	578
1000x1000x700	40x40x28	891	200	817	140	596
1000x1000x750	40x40x30	891	200	817	140	601
1000x1000x800	40x40x32	891	200	855	170	614
1000x1000x900	40x40x36	891	200	885	200	632

10 Bar Fittings

Concentric Reducers

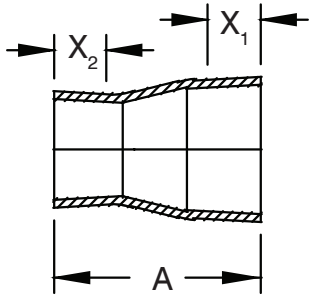


Nominal Pipe Size		A	X ₁	X ₂	Wgt.
mm	in	mm	mm	mm	kg
80x50	3x2	174	50	50	0.8
100x50	4x2	196	50	50	1.1
100x80	4x3	194	50	50	1.3
150x80	6x3	217	50	50	1.5
150x100	6x4	224	50	50	1.8
200x100	8x4	293	80	50	3.3
200x150	8x6	259	80	50	3.7
250x150	10x6	278	80	50	6.2
250x200	10x8	295	80	80	6.2
300x200	12x8	340	80	80	7.8
300x250	12x10	327	80	80	8.5
350x250	14x10	374	80	80	10.2
350x300	14x12	368	80	80	11.0
400x300	16x12	385	110	80	13.7
400x350	16x14	373	110	80	12.8
450x400	18x16	348	110	110	20.0
500x400	20x16	469	110	110	21.0
500x450	20x18	371	110	110	23.0
600x400	24x16	706	110	110	27.0
600x450	24x18	608	110	110	26.0
600x500	24x20	487	110	110	24.0
700x400	28x16	1046	140	110	62.0
700x450	28x18	948	140	110	60.0
700x500	28x20	827	140	110	58.0
700x600	28x24	590	140	110	52.0
750x400	30x16	1165	140	110	74.0
750x450	30x18	1067	140	110	73.0
750x500	30x20	946	140	110	70.0
750x600	30x24	709	140	110	64.0
750x700	30x28	429	140	140	58.0
800x400	32x16	1318	170	110	94.0
800x450	32x18	1212	170	110	92.0
800x500	32x20	1099	170	110	90.0
800x600	32x24	862	170	110	83.0
800x700	32x28	582	170	140	77.0
800x750	32x30	463	170	140	72.0
900x450	36x18	1496	200	110	133.0
900x500	36x20	1375	200	110	130.0

Note: Eccentric Reducers are available on request.

10 Bar Fittings

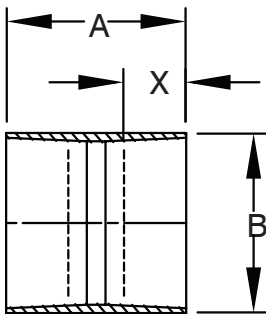
Concentric Reducers



Nominal Pipe Size		A	X ₁	X ₂	Wgt.
mm	in	mm	mm	mm	kg
900x600	36x24	1138	200	110	122.0
900x700	36x28	858	200	140	116.0
900x750	36x30	739	200	140	111.0
900x800	36x32	646	200	170	111.0
1000x500	40x20	1623	200	110	173.0
1000x600	40x24	1386	200	110	165.0
1000x700	40x28	1106	200	140	157.0
1000x750	40x30	987	200	140	152.0
1000x800	40x32	894	200	170	152.0
1000x900	40x36	678	200	200	146.0

Note: Eccentric Reducers are available on request.

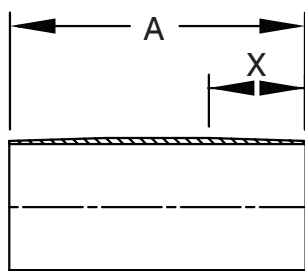
Couplings



Nominal Pipe Size		A	X	B	Wgt.
mm	in	mm	mm	mm	kg
50	2	170	50	70	0.4
80	3	170	50	100	0.7
100	4	170	50	124	0.9
150	6	170	50	180	1.5
200	8	230	80	230	2.5
250	10	230	80	286	3.4
300	12	230	80	339	4.5
350	14	230	80	370	4.8
400	16	290	110	419	6.4
450	18	290	110	460	7.3
500	20	290	110	524	14.4
600	24	290	110	606	9.8
700	28	350	140	734	16.3
750	30	350	140	783	16.6
800	32	410	170	840	27.0
900	36	470	200	937	29.0
1000	40	470	200	1038	33.0

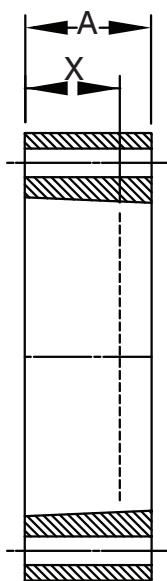
10 Bar Fittings

Nipples



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	125	50	0.1
80	3	125	50	0.1
100	4	125	50	0.1
150	6	125	50	0.2
200	8	190	80	0.6
250	10	190	80	0.8
300	12	200	80	1.1
350	14	200	80	1.4
400	16	260	110	2.2
450	18	280	110	2.7
500	20	280	110	3.4
600	24	280	110	4.4
700	28	340	140	8.5
750	30	340	140	9.4
800	32	400	170	12.4
900	36	460	200	17.2
1000	40	460	200	21.0

Heavy-Duty Flanges



Nominal Pipe Size		A	X	Wgt. ⁽²⁾
mm	in	mm	mm	kg
50	2	55	50	1.5
80	3	55	50	2.2
100	4	55	50	2.9
150	6	55	50	3.7
200	8	56	50 ⁽¹⁾	5.5
250	10	86	80	10.6
300	12	86	80	15.3
350	14	86	80	18.7
400	16	86	80 ⁽¹⁾	23.0
450	18	86	80 ⁽¹⁾	24.0
500	20	116	110	38.0
600	24	116	110	49.0
700	28	146	140	67.0
750	30	146	140	73.0
800	32	176	170	117.0

Notes:

(1) Insertion depth for subsequent flanges deviates from other fittings.

(2) The weights shown are for ANSI B16.5 Class 150 drilled flanges. Weights for other drilling classes may be different. For more detailed information reference is made to the appropriate product data.

*Heavy Duty Flanges are standard available in drillings according to ANSI and ISO (DIN).

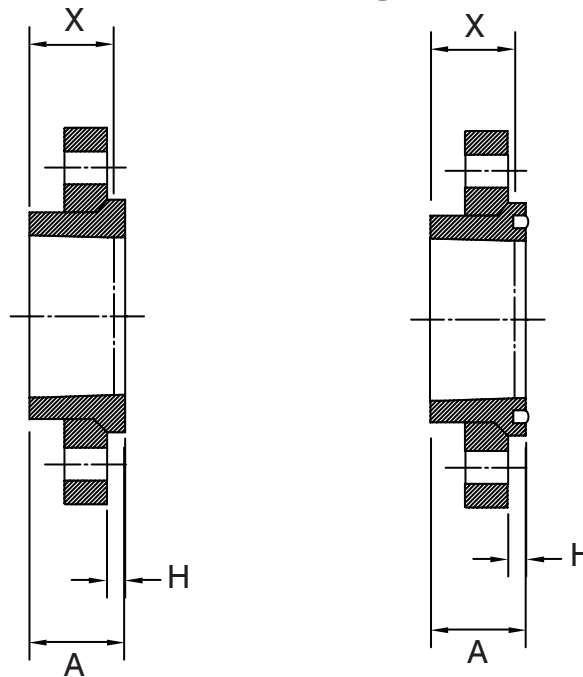
**Full-face elastomeric gaskets may be used, suitable for the service pressure, service temperature and fluid. Shore A durometer hardness of 60 ±5 is recommended and a thickness of 3 mm.

Compressed fibre gaskets, 3 mm thick, compatible with the pressure, temperature and medium, may also be used. The mechanical properties should be in accordance with DIN 3754 (IT 400) or equal.

***For maximum bolt torque refer to the appropriate Bondstrand literature. Please be aware that excessive torque may result in flange failure and, therefore a torque-wrench is required.

10 Bar Fittings

Stub-end Flanges (Van Stone)



Nominal Pipe Size		A	X	H	Stub End Wgt.	Steel Ring Wgt. ⁽¹⁾
mm	in	mm	mm	mm	kg	kg
50	2	65	50	10	0.2	1.8
80	3	65	50	10	0.5	3.2
100	4	65	50	12	0.8	4.2
150	6	65	50	13	1.3	5.2
200	8	95	80	20	2.6	8.5
250	10	95	80	16	3.1	13.5
300	12	95	80	18	3.9	23.0
350	14	95	80	19	3.8	32.0
400	16	130	110	21	6.9	42.0
450	18	130	110	24	11.4	40.0
500	20	130	110	23	12.3	51.0
600	24	130	110	28	13.0	86.0
700	28	160	140	29	17.8	100.0
750	30	160	140	32	19.7	117.0
800	32	190	170	33	24.0	154.0
900	36	220	200	36	30.0	197.0
1000	40	220	200	46	35.0	303.0

Notes:

(1)The weight shown is for ANSI B16.5 Class 150 drilled flanges. Weights for other drilling classes may be different. For more detailed information reference is made to the appropriate product data.

*Stub-End Flange Rings are standard available in drillings according to ANSI and ISO (DIN).

**Stub-End Flanges are available with and without O-ring groove in the face.

Up to 10 bar stub-ends without grooves can be used with flat elastomeric or compressed fibre gaskets.

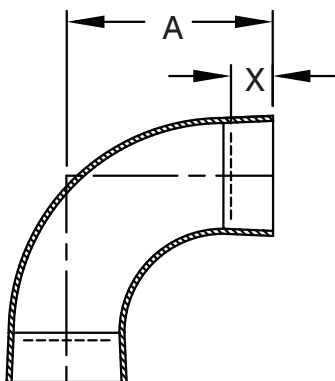
For pressures 12 bar and above suitable O-ring seals should be used, available on request.

***Make sure that the O-ring grooved stub-end is compatible with its counter flange, e.g. use a stub-end without groove or another flat surface flange as counter flange.

****Maximum bolt-torque for use with O-rings seals may be calculated based on pressure, size and number of bolts. If using flat face gaskets (maximum pressure 10 bar) refer to the appropriate Bondstrand literature for hubbed flanges.

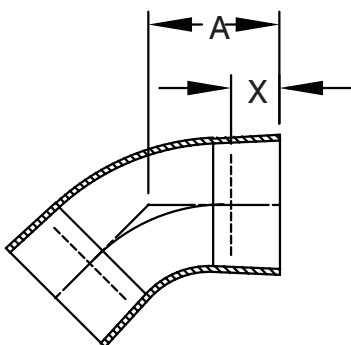
16 Bar Fittings

90° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	137	50	0.6
80	3	176	50	1.1
100	4	205	50	2.1
150	6	290	50	4.2
200	8	395	80	12.0
250	10	501	110	16.1
300	12	603	140	26.0
350	14	504	140	37.0
400	16	572	170	53.0
450	18	642	170	76.0
500	20	723	200	125.0
600	24	855	230	228.0
700	28	956	230	238.0
750	30	1037	260	290.0
800	32	1118	290	364.0
900	36	1279	350	595.0

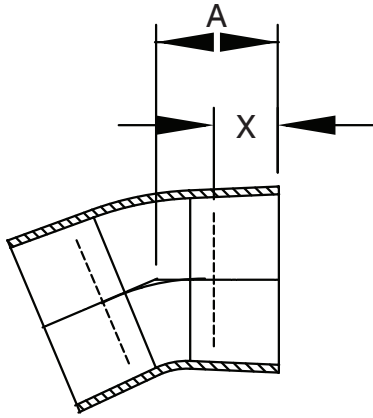
45° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	95	50	0.5
80	3	111	50	0.9
100	4	123	50	1.3
150	6	156	50	2.5
200	8	217	80	7.4
250	10	279	110	12.4
300	12	336	140	22.0
350	14	265	140	29.0
400	16	312	170	41.0
450	18	374	170	54.0
500	20	425	200	75.0
600	24	498	230	130.0
700	28	540	230	177.0
750	30	591	260	226.0
800	32	642	290	272.0
900	36	744	350	463.0

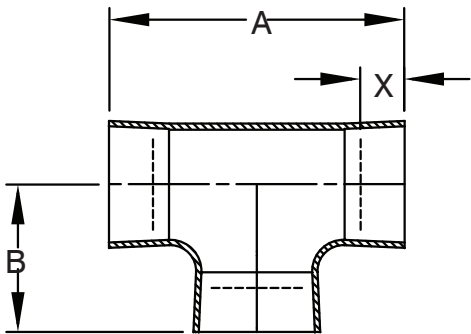
16 Bar Fittings

22½° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	79	50	0.4
80	3	87	50	0.6
100	4	93	50	0.9
150	6	110	50	1.4
200	8	156	80	5.1
250	10	178	110	9.7
300	12	217	140	15.5
350	14	211	140	21.0
400	16	255	170	24.0
450	18	276	170	39.0
500	20	316	200	56.0
600	24	366	230	93.0
700	28	387	230	123.0
750	30	427	260	158.0
800	32	467	290	198.0
900	36	547	350	343.0

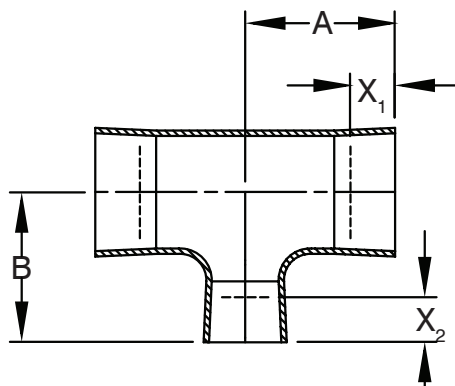
Tees



Nominal Pipe Size		A	B	X	Wgt.
mm	in	mm	mm	mm	kg
50	2	248	124	50	1.3
80	3	292	146	50	2.9
100	4	330	165	50	4.0
150	6	406	203	50	8.7
200	8	536	268	80	21.0
250	10	672	336	110	31.0
300	12	808	404	140	50.0
350	14	824	412	140	55.0
400	16	930	465	170	87.0
450	18	1018	509	170	103.0
500	20	1140	570	200	209.0
600	24	1328	664	230	351.0
700	28	1454	727	230	476.0
750	30	1566	783	260	591.0
800	32	1698	849	290	727.0
900	36	1948	974	350	1213.0

16 Bar Fittings

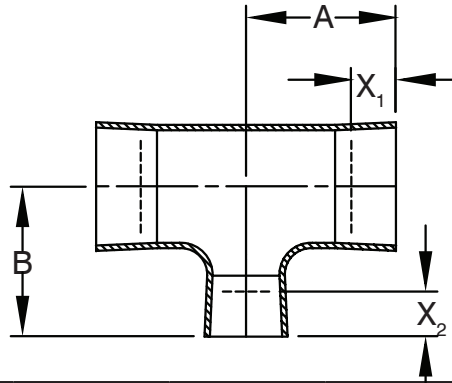
Reducing Tees



Nominal Pipe Size		A	X ₁	B	X ₂	Wgt.
mm	in	mm	mm	mm	mm	kg
80x80x50	3x3x2	146	50	136	50	2.7
100x100x50	4x4x2	165	50	149	50	3.8
100x100x80	4x4x3	165	50	158	50	4.0
150x150x50	6x6x2	203	50	174	50	8.0
150x150x80	6x6x3	203	50	184	50	9.6
150x150x100	6x6x4	203	50	190	50	9.6
200x200x80	8x8x3	268	80	209	50	16.0
200x200x100	8x8x4	268	80	222	50	16.7
200x200x150	8x8x6	268	80	228	50	13.2
250x250x100	10x10x4	336	110	244	50	29.0
250x250x150	10x10x6	336	110	254	50	28.0
250x250x200	10x10x8	336	110	293	80	34.0
300x300x100	12x12x4	404	140	266	50	43.0
300x300x150	12x12x6	404	140	279	50	42.0
300x300x200	12x12x8	404	140	319	80	45.0
300x300x250	12x12x10	404	140	361	110	51.0
350x350x150	14x14x6	412	140	304	50	41.0
350x350x200	14x14x8	412	140	344	80	54.0
350x350x250	14x14x10	412	140	387	110	62.0
350x350x300	14x14x12	412	140	429	140	66.0
400x400x150	16x16x6	465	170	324	50	51.0
400x400x200	16x16x8	465	170	363	80	56.0
400x400x250	16x16x10	465	170	403	110	63.0
400x400x300	16x16x12	465	170	445	140	67.0
400x400x350	16x16x14	465	170	455	140	710.0
450x450x200	18x18x8	509	170	396	80	100.0
450x450x250	18x18x10	509	170	439	110	104.0
450x450x300	18x18x12	509	170	469	140	107.0
450x450x350	18x18x14	509	170	470	140	137.0
450x450x400	18x18x16	509	170	500	170	143.0
500x500x250	20x20x10	570	200	465	110	180.0
500x500x300	20x20x12	570	200	495	140	186.0
500x500x350	20x20x14	570	200	496	140	188.0
500x500x400	20x20x16	570	200	526	170	195.0
500x500x450	20x20x18	570	200	535	170	200.0
600x600x300	24x24x12	664	230	545	140	211.0

16 Bar Fittings

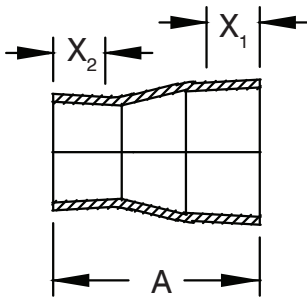
Reducing Tees (cont.)



Nominal Pipe Size		A	X ₁	B	X ₂	Wgt.
mm	in	mm	mm	mm	mm	kg
600x600x350	24x24x14	664	230	546	140	281.0
600x600x400	24x24x16	664	230	576	170	220.0
600x600x450	24x24x18	664	230	598	170	239.0
600x600x500	24x24x20	664	230	628	200	279.0
700x700x400	28x28x16	727	230	655	170	423
700x700x450	28x28x18	727	230	653	170	428
700x700x500	28x28x20	727	230	691	200	440
700x700x600	28x28x24	727	230	721	230	458
750x750x400	30x30x16	783	260	671	170	516
750x750x450	30x30x18	783	260	679	170	522
750x750x500	30x30x20	783	260	709	200	534
750x750x600	30x30x24	783	260	747	230	555
750x750x700	30x30x28	783	260	747	230	573
800x800x400	32x32x16	849	290	707	170	628
800x800x450	32x32x18	849	290	707	170	633
800x800x500	32x32x20	849	290	745	200	647
800x800x600	32x32x24	849	290	775	230	667
800x800x700	32x32x28	849	290	783	230	689
800x800x750	32x32x30	849	290	813	260	706
900x900x450	36x36x18	974	350	773	170	1035
900x900x500	36x36x20	974	350	803	200	1052
900x900x600	36x36x24	974	350	841	230	1082
900x900x700	36x36x28	974	350	841	230	964
900x900x750	36x36x30	974	350	878	260	986
900x900x800	36x36x32	974	350	908	290	1008

16 Bar Fittings

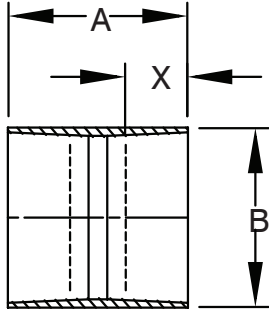
Concentric Reducers



Nominal Pipe Size		A	X_1	X_2	Wgt.
mm	in	mm	mm	mm	kg
80x50	3x2	174	50	50	0.8
100x50	4x2	196	50	50	1.1
100x80	4x3	194	50	50	1.3
150x80	6x3	217	50	50	1.5
150x100	6x4	224	50	50	1.8
200x100	8x4	293	80	50	4.3
200x150	8x6	259	80	50	4.3
250x150	10x6	308	110	50	6.2
250x200	10x8	325	110	80	6.9
300x200	12x8	400	140	80	9.9
300x250	12x10	417	140	110	10.8
350x250	14x10	464	140	110	17.0
350x300	14x12	488	140	140	16.8
400x300	16x12	505	170	140	22.0
400x350	16x14	493	170	140	23.0
450x400	18x16	468	170	170	27.0
500x400	20x16	619	200	170	36.0
500x450	20x18	521	200	170	35.0
600x400	24x16	886	230	170	70.0
600x450	24x18	788	230	170	70.0
600x500	24x20	697	230	200	70.0
700x400	28x16	1196	230	170	141.0
700x450	28x18	1098	230	170	140.0
700x500	28x20	1007	230	200	142.0
700x600	28x24	800	230	230	142.0
750x400	30x16	1345	260	170	177.0
750x450	30x18	1247	260	170	175.0
750x500	30x20	1156	260	200	177.0
750x600	30x24	949	260	230	177.0
750x700	30x28	639	260	230	165.0
800x400	32x16	1498	290	170	216.0
800x450	32x18	1400	290	170	214.0
800x500	32x20	1309	290	200	217.0
800x600	32x24	1102	290	230	217.0
800x700	32x28	792	290	230	203.0
800x750	32x30	703	290	260	207.0
900x450	36x18	1706	350	170	358.0
900x500	36x20	1615	350	200	362.0
900x600	36x24	1408	350	230	361.0
900x700	36x28	1098	350	230	300.0
900x750	36x30	1009	350	260	304.0
900x800	36x32	916	350	290	307.0

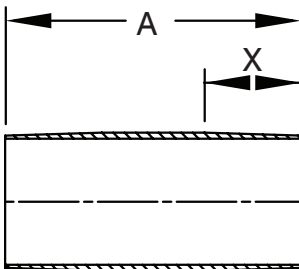
16 Bar Fittings

Couplings



Nominal Pipe Size		A	X	B	Wgt.
mm	in	mm	mm	mm	kg
50	2	170	50	70	0.4
80	3	170	50	100	0.7
100	4	170	50	124	0.9
150	6	170	50	180	1.5
200	8	230	80	230	2.5
250	10	290	110	286	4.0
300	12	350	140	350	9.8
350	14	350	140	381	10.5
400	16	410	170	430	13.2
450	18	410	170	460	9.0
500	20	470	200	524	21.0
600	24	530	230	619	24.0
700	28	530	230	745	31.0
750	30	590	260	795	34.0
800	32	650	290	840	32.0
900	36	770	350	951	50.0

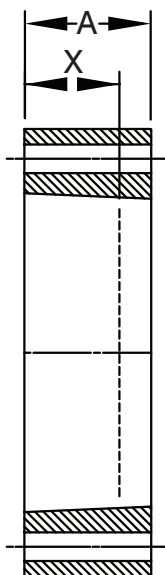
Nipples



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	125	50	0.1
80	3	125	50	0.1
100	4	125	50	0.1
150	6	125	50	0.3
200	8	190	80	0.7
250	10	250	110	1.3
300	12	320	140	2.4
350	14	320	140	3.0
400	16	380	170	4.6
450	18	400	170	5.6
500	20	460	200	8.3
600	24	520	230	13.3
700	28	520	230	19.7
750	30	580	260	26.0
800	32	640	290	30.0
900	36	760	350	39.0

16 Bar Fittings

Heavy-Duty Flanges



Nominal Pipe Size		A	X	Wgt. ⁽²⁾
mm	in	mm	mm	kg
50	2	55	50	1.5
80	3	55	50	2.2
100	4	55	50	2.9
150	6	55	50	3.7
200	8	86	80	8.4
250	10	116	110	14.3
300	12	116	110 ⁽¹⁾	21.0
350	14	116	110 ⁽¹⁾	25.0
400	16	146	140 ⁽¹⁾	38.0
450	18	146	140 ⁽¹⁾	41.0
500	20	176	170 ⁽¹⁾	58.0

Notes:

(1) Insertion depth for subsequent flanges deviates from other fittings.

(2) The weights shown are for ANSI B16.5 Class 150 drilled flanges. Weights for other drilling classes may be different. For more detailed information reference is made to the appropriate product data.

*Heavy Duty Flanges are standard available in drillings according to ANSI and ISO (DIN).

**Full-face elastomeric gaskets may be used, suitable for the service pressure, service temperature and fluid. Shore A durometer hardness of 60 ±5 is recommended and a thickness of 3 mm.

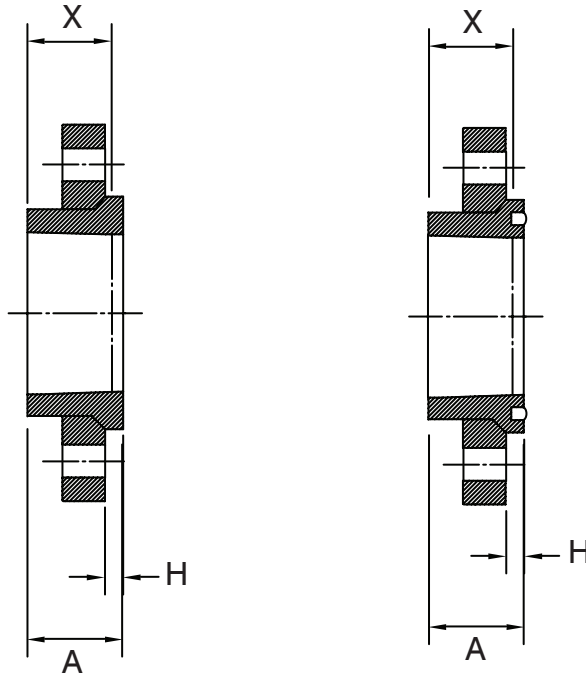
Compressed fiber gaskets, 3 mm thick, compatible with the pressure, temperature and medium, may also be used.

The mechanical properties should be in accordance with DIN 3754 (IT 400) or equal.

***For maximum bolt torque refer to the appropriate Bondstrand literature. Please be aware that excessive torque may result in flange failure and, therefore a torque- wrench is required.

16 Bar Fittings

Stub-end Flanges Van Stone



Nominal Pipe Size		A	X	H	Wgt. Stub Ends	Wgt. Steel Rings ⁽¹⁾
mm	in	mm	mm	mm	kg	kg
50	2	65	50	10	0.2	1.8
80	3	65	50	10	0.5	3.2
100	4	65	50	12	0.8	4.2
150	6	65	50	13	1.3	5.2
200	8	95	80	20	2.6	8.5
250	10	125	110	23	4.0	13.5
300	12	155	140	26	5.9	23.0
350	14	155	140	27	5.8	32.0
400	16	190	170	32	9.6	42.0
450	18	190	170	35	16.1	40.0
500	20	220	200	39	19.8	51.0
600	24	250	230	47	22	86.0
700	28	250	230	51	26	100.0
750	30	280	260	46	29	117.0
800	32	310	290	48	34	154.0
900	36	370	350	53	41	197.0

Notes:

(1)The weight shown is for ANSI B16.5 Class 150 drilled flanges. Weights for other drilling classes may be different. For more detailed information reference is made to the appropriate product data.

*Stub-End Flange Rings are standard available in drillings according to ANSI and ISO (DIN).

**Stub-End Flanges are available with and without O-ring groove in the face.

Up to 10 bar stub-ends without grooves can be used with flat elastomeric or compressed fiber gaskets.

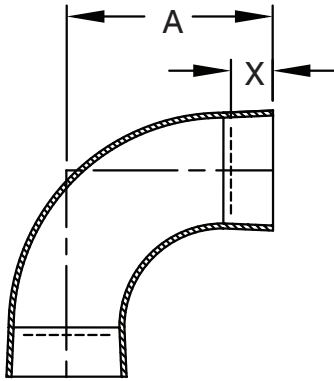
For pressures 12 bar and above suitable O-ring seals should be used, available on request.

***Make sure that the O-ring grooved stub-end is compatible with its counter flange, e.g. use a stub-end without groove or another flat surface flange as counter flange.

****Maximum bolt-torque for use with O-rings seals may be calculated based on pressure, size and number of bolts. If using flat face gaskets (maximum pressure 10 bar) refer to the appropriate Bondstrand literature for hubbed flanges.

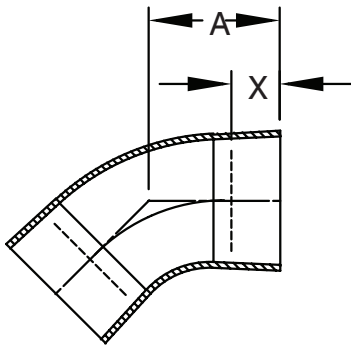
20 Bar Fittings

90° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	137	50	0.6
80	3	176	50	1.1
100	4	205	50	2.1
150	6	320	80	5.8
200	8	395	80	12.0
250	10	501	110	16.1
300	12	603	140	26.0
350	14	504	140	37.0
400	16	572	170	53.0
450	18	642	170	76.0
500	20	723	200	125.0
600	24	855	230	228.0
700	28	1016	290	293.0

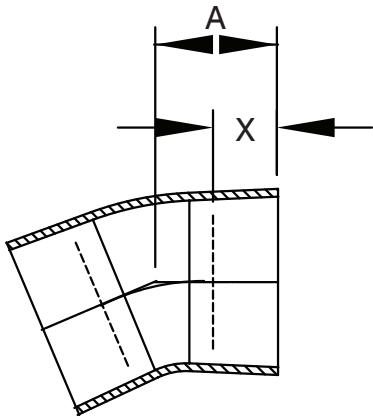
45° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	95	50	0.5
80	3	111	50	0.9
100	4	123	50	1.3
150	6	186	80	3.9
200	8	217	80	7.4
250	10	279	110	12.4
300	12	336	140	22.0
350	14	265	140	29.0
400	16	312	170	41.0
450	18	374	170	54.0
500	20	425	200	75.0
600	24	498	230	130.0
700	28	600	290	229.0

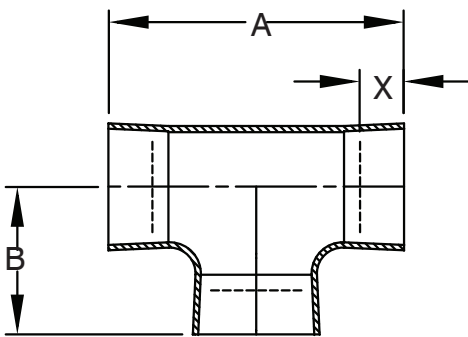
20 Bar Fittings

22½° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	79	50	0.4
80	3	87	50	0.6
100	4	93	50	0.9
150	6	140	80	2.8
200	8	156	80	5.1
250	10	178	110	9.7
300	12	217	140	15.5
350	14	211	140	21.0
400	16	255	170	24.0
450	18	276	170	39.0
500	20	316	200	56.0
600	24	366	230	93.0
700	28	447	290	173.0

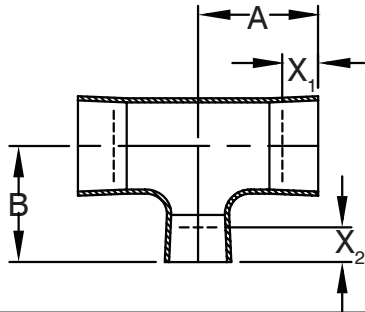
Tees



Nominal Pipe Size		A	B	X	Wgt.
mm	in	mm	mm	mm	kg
50	2	248	124	50	1.3
80	3	292	146	50	2.9
100	4	330	165	50	4.0
150	6	466	233	80	11.9
200	8	536	268	80	21.0
250	10	672	336	110	21.0
300	12	808	404	140	50.0
350	14	824	412	140	55.0
400	16	930	465	170	87.0
450	18	1018	509	170	103.0
500	20	1140	570	200	209.0
600	24	1328	664	230	351.0
700	28	1574	787	290	599.0

20 Bar Fittings

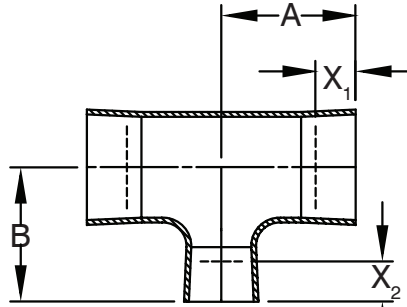
Reducing Tees



Nominal Pipe Size		A	X ₁	B	X ₂	Wgt.
mm	in	mm	mm	mm	mm	kg
80x80x50	3x3x2	146	50	136	50	2.7
100x100x50	4x4x2	165	50	149	50	3.8
100x100x80	4x4x3	165	50	158	50	4.0
150x150x50	6x6x2	233	80	174	50	10.9
150x150x80	6x6x3	233	80	184	50	12.0
150x150x100	6x6x4	233	80	190	50	12.2
200x200x80	8x8x3	268	80	209	50	16.0
200x200x100	8x8x4	268	80	222	50	16.7
200x200x150	8x8x6	268	80	258	80	17.9
250x250x100	10x10x4	336	110	244	50	29.0
250x250x150	10x10x6	336	110	284	80	32.0
250x250x200	10x10x8	336	110	293	80	34.0
300x300x100	12x12x4	404	140	266	50	43.0
300x300x150	12x12x6	404	140	309	80	44.0
300x300x200	12x12x8	404	140	319	80	45.0
300x300x250	12x12x10	404	140	361	110	51.0
350x350x150	14x14x6	412	140	334	80	42.0
350x350x200	14x14x8	412	140	344	80	54.0
350x350x250	14x14x10	412	140	387	110	62.0
350x350x300	14x14x12	412	140	429	140	66.0
400x400x150	16x16x6	465	170	354	80	55.0
400x400x200	16x16x8	465	170	363	80	56.0
400x400x250	16x16x10	465	170	403	110	63.0
400x400x300	16x16x12	465	170	445	140	67.0
400x400x350	16x16x14	465	170	455	140	71.0
450x450x200	18x18x8	509	170	396	80	100.0
450x450x250	18x18x10	509	170	439	110	104.0
450x450x300	18x18x12	509	170	469	140	107.0
450x450x350	18x18x14	509	170	470	140	137.0
450x450x400	18x18x16	509	170	500	170	143.0
500x500x250	20x20x10	570	200	465	110	180.0
500x500x300	20x20x12	570	200	495	140	186.0
500x500x350	20x20x14	570	200	496	140	188.0
500x500x400	20x20x16	570	200	526	170	195.0
500x500x450	20x20x18	570	200	535	170	200.0
600x600x300	24x24x12	664	230	545	140	211.0
600x600x350	24x24x14	664	230	546	140	281.0
600x600x400	24x24x16	664	230	576	170	220.0

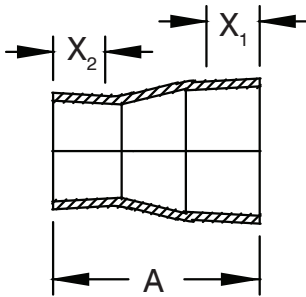
20 Bar Fittings

Reducing Tees (cont.)



Nominal Pipe Size		A	X ₁	B	X ₂	Wgt.
mm	in	mm	mm	mm	mm	kg
600x600x450	24x24x18	664	230	598	170	239.0
600x600x500	24x24x20	664	230	628	200	279.0
700x700x400	28x28x16	787	290	653	170	520.0
700x700x450	28x28x18	787	290	653	170	525.0
700x700x500	28x28x20	787	290	691	200	539.0
700x700x600	28x28x24	787	290	721	230	560.0

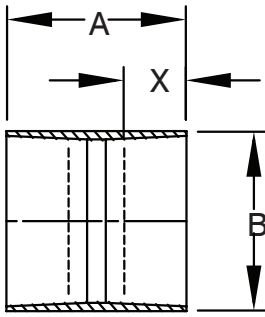
Concentric Reducers



Nominal Pipe Size		A	X ₁	X ₂	Wgt.
mm	in	mm	mm	mm	kg
80x50	3x2	174	50	50	0.8
100x50	4x2	196	50	50	1.1
100x80	4x3	194	50	50	1.3
150x80	6x3	247	80	50	2.2
150x100	6x4	254	80	50	2.4
200x100	8x4	293	80	50	4.3
200x150	8x6	289	80	80	5.1
250x150	10x6	338	110	80	6.8
250x200	10x8	325	110	80	6.9
300x200	12x8	400	140	80	9.9
300x250	12x10	417	140	110	10.8
350x250	14x10	464	140	110	17.0
350x300	14x12	488	140	140	16.8
400x300	16x12	505	170	140	22.0
400x350	16x14	493	170	140	23.0
450x400	18x16	468	170	170	27.0
500x400	20x16	619	200	170	36.0
500x450	20x18	521	200	170	35.0
600x400	24x16	886	230	170	70.0
600x450	24x18	788	230	170	70.0
600x500	24x20	697	230	200	70.0
700x400	28x16	1256	290	170	180.0
700x450	28x18	1158	290	170	156.0
700x500	28x20	1067	290	200	181.0
700x600	28x24	860	290	230	132.0

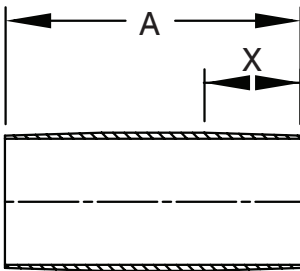
20 Bar Fittings

Couplings



Nominal Pipe Size		A	X	B	Wgt.
mm	in	mm	mm	mm	kg
50	2	170	50	70	0.4
80	3	170	50	100	0.7
100	4	170	50	124	0.9
150	6	230	80	180	1.9
200	8	230	80	230	2.5
250	10	290	110	286	4.0
300	12	350	140	350	9.8
350	14	350	140	381	10.5
400	16	410	170	430	13.2
450	18	410	170	460	9.0
500	20	470	200	524	21.0
600	24	530	230	619	24.0
700	28	650	290	745	35.0

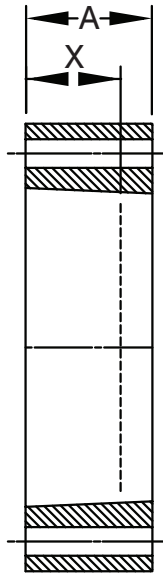
Nipples



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	125	50	0.1
80	3	125	50	0.1
100	4	125	50	0.1
150	6	185	80	0.5
200	8	190	80	0.7
250	10	250	110	1.4
300	12	320	140	2.5
350	14	320	140	3.1
400	16	380	170	4.8
450	18	400	170	5.8
500	20	460	200	8.7
600	24	520	230	13.9
700	28	640	290	27.0

20 Bar Fittings

Heavy-Duty Flanges



Nominal Pipe Size		A	X	Wgt. ⁽¹⁾
mm	in	mm	mm	kg
50	2	55	50	1.5
80	3	55	50	2.2
100	4	55	50	2.9
150	6	85	80	5.8
200	8	86	80	8.4
250	10	116	110	14.3
300	12	146	140	26.0
350	14	146	140	33.0
400	16	176	170	46.0
450	18	176	170	49.0

Notes:

(1) The weights shown are for ANSI B16.5 Class 150 drilled flanges. Weights for other drilling classes may be different. For more detailed information reference is made to the appropriate product data.

*Heavy Duty Flanges are standard available in drillings according to ANSI and ISO (DIN).

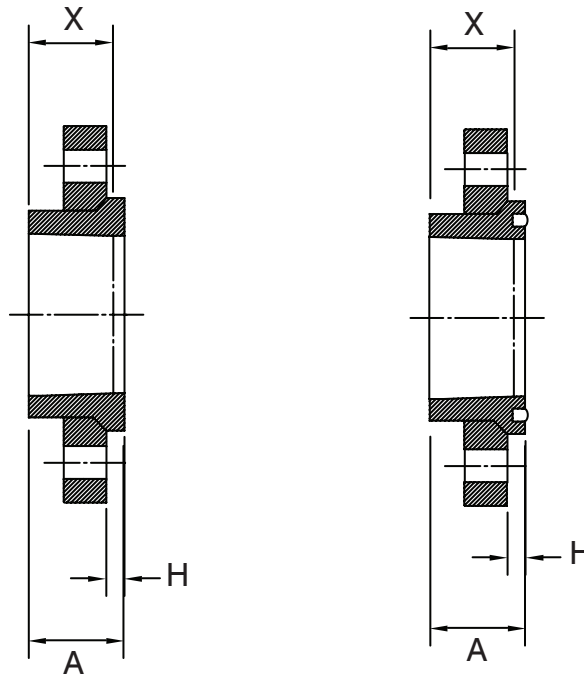
**Full-face elastomeric gaskets may be used, suitable for the service pressure, service temperature and fluid. Shore A durometer hardness of 60 ±5 is recommended and a thickness of 3 mm.

Compressed fiber gaskets, 3 mm thick, compatible with the pressure, temperature and medium, may also be used. The mechanical properties should be in accordance with DIN 3754 (IT 400) or equal.

***For maximum bolt torque refer to the appropriate Bondstrand literature. Please be aware that excessive torque may result in flange failure and, therefore a torque-wrench is required.

20 Bar Fittings

Stub-end Flange (Van Stone)



Nominal Pipe Size		A	X	H	Wgt. Stub End	Wgt. Steel Ring ⁽¹⁾
mm	in	mm	mm	mm	kg	kg
50	2	65	50	10	0.2	1.8
80	3	65	50	10	0.5	3.2
100	4	65	50	12	0.8	4.2
150	6	95	80	16	1.8	5.2
200	8	95	80	20	2.6	8.5
250	10	125	110	23	4.0	13.5
300	12	155	140	26	5.9	23.0
350	14	155	140	27	5.8	32.0
400	16	190	170	32	9.6	42.0
450	18	190	170	35	16.1	40.0
500	20	220	200	39	19.8	51.0
600	24	250	230	47	22	86.0
700	28	310	290	51	29	100.0

Notes:

(1)The weight shown is for ANSI B16.5 Class 150 drilled flanges. Weights for other drilling classes may be different. For more detailed information reference is made to the appropriate product data.

*Stub-End Flange Rings are standard available in drillings according to ANSI and ISO (DIN).

**Stub-End Flanges are available with and without O-ring groove in the face.

Up to 10 bar stub-ends without grooves can be used with flat elastomeric or compressed fiber gaskets.

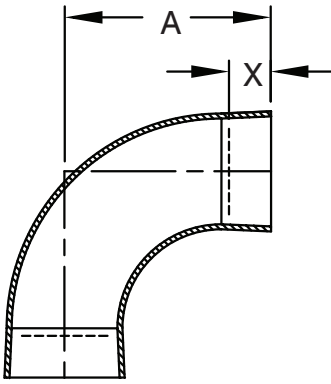
For pressures 12 bar and above suitable O-ring seals should be used, available on request.

***Make sure that the O-ring grooved stub-end is compatible with its counter flange, e.g. use a stub-end without groove or another flat surface flange as counter flange.

****Maximum bolt-torque for use with O-rings seals may be calculated based on pressure, size and number of bolts. If using flat face gaskets (maximum pressure 10 bar) refer to the appropriate Bondstrand literature for hubbed flanges.

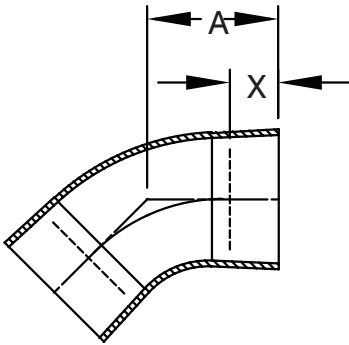
25 Bar Fittings

90° Elbow



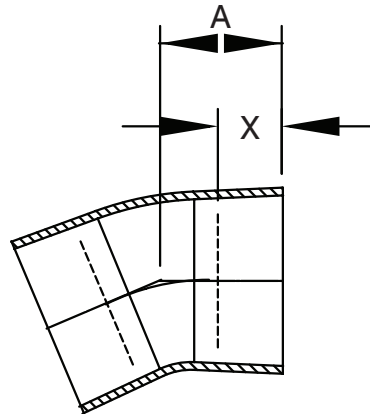
Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	137	50	0.6
80	3	190	80	2.1
100	4	235	80	3.8
150	6	350	110	8.7
200	8	455	140	24.0
250	10	561	170	39.0
300	12	663	200	61.0
350	14	544	170	51.0
400	16	632	230	84.0
450	18	679	200	87.0
500	20	778	230	173.0
600	24	910	260	266.0
700	28	1076	350	365.0

45° Elbow



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	95	50	0.5
80	3	141	80	1.7
100	4	153	80	2.4
150	6	216	110	7.0
200	8	277	140	15.5
250	10	339	170	32.0
300	12	396	200	47.0
350	14	305	170	38.0
400	16	372	230	80.0
450	18	429	200	78.0
500	20	480	230	109.0
600	24	553	260	184.0
700	28	660	350	333.0

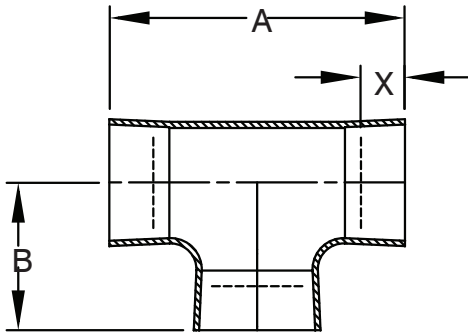
22½° Elbow



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	79	50	0.4
80	3	117	80	1.5
100	4	123	80	2.0
150	6	170	110	5.9
200	8	216	140	10.5
250	10	238	170	19.1
300	12	277	200	32.0
350	14	251	170	26.0
400	16	315	230	57.0
450	18	331	200	51.0
500	20	371	230	71.0
600	24	421	260	114.0
700	28	507	350	221.0

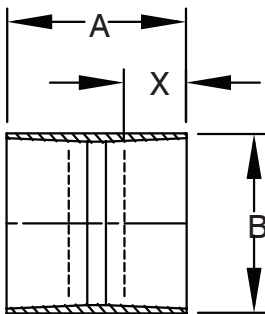
25 Bar Fittings

Tees



Nominal Pipe Size		A	B	X	Wgt.
mm	in	mm	mm	mm	kg
50	2	248	124	50	1.6
80	3	352	176	80	3.6
100	4	390	195	80	6.4
150	6	526	263	110	18.0
200	8	656	328	140	37.0
250	10	792	396	170	55.0
300	12	928	464	200	92.0
350	14	904	452	170	80.0
400	16	1050	525	230	126.0
450	18	1128	564	200	218.0
500	20	1250	625	230	297.0
600	24	1438	719	260	483.0
700	28	1694	847	350	828.0

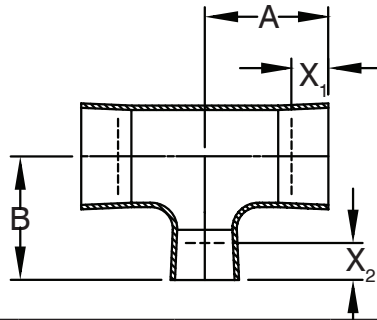
Couplings



Nominal Pipe Size		A	X	B	Wgt.
mm	in	mm	mm	mm	kg
50	2	170	50	70	0.4
80	3	230	80	100	0.9
100	4	230	80	124	1.2
150	6	290	110	180	2.2
200	8	350	140	238	5.0
250	10	410	170	296	7.9
300	12	470	200	350	11.6
350	14	410	170	381	11.3
400	16	530	230	435	17.4
450	18	470	200	472	15.8
500	20	530	230	524	21.0
600	24	590	260	634	39.0
700	28	770	350	752	39.0

25 Bar Fittings

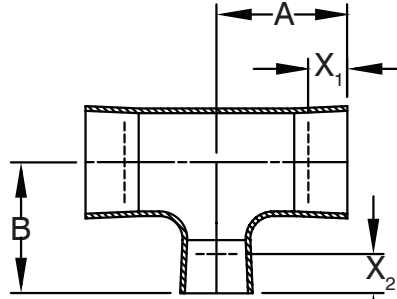
Reducing Tees



Nominal Pipe Size		A	X ₁	B	X ₂	Wgt.
mm	in	mm	mm	mm	mm	kg
80x80x50	3x3x2	176	80	136	50	3.0
100x100x50	4x4x2	195	80	149	50	5.4
100x100x80	4x4x3	195	80	188	80	5.5
150x150x50	6x6x2	263	110	174	50	12.2
150x150x80	6x6x3	263	110	214	80	12.6
150x150x100	6x6x4	263	110	220	80	13.7
200x200x80	8x8x3	328	140	239	80	19.3
200x200x100	8x8x4	328	140	252	80	26.0
200x200x150	8x8x6	328	140	288	110	33.0
250x250x100	10x10x4	396	170	274	80	42.0
250x250x150	10x10x6	396	170	314	110	42.0
250x250x200	10x10x8	396	170	353	140	53.0
300x300x100	12x12x4	464	200	296	80	60.0
300x300x150	12x12x6	464	200	339	110	86.0
300x300x200	12x12x8	464	200	379	140	90.0
300x300x250	12x12x10	464	200	421	170	92.0
350x350x150	14x14x6	452	170	364	110	66.0
350x350x200	14x14x8	452	170	404	80	69.0
350x350x250	14x14x10	452	170	447	170	74.0
350x350x300	14x14x12	452	170	489	200	79.0
400x400x150	16x16x6	525	230	384	110	97.0
400x400x200	16x16x8	525	230	423	140	102.0
400x400x250	16x16x10	525	230	463	170	107.0
400x400x300	16x16x12	525	230	505	200	117.0
400x400x350	16x16x14	525	230	495	170	100.0
450x450x200	18x18x8	564	200	456	140	158.0
450x450x250	18x18x10	564	200	499	170	165.0
450x450x300	18x18x12	564	200	529	200	172.0
450x450x350	18x18x14	564	200	510	170	172.0
450x450x400	18x18x16	564	200	560	230	182.0
500x500x250	20x20x10	625	230	525	170	257.0
500x500x300	20x20x12	625	230	555	200	265.0
500x500x350	20x20x14	625	230	536	170	267.0
500x500x400	20x20x16	625	230	586	230	279.0
500x500x450	20x20x18	625	230	590	200	285.0
600x600x300	24x24x12	719	260	605	200	422.0
600x600x350	24x24x14	719	260	586	170	423.0
600x600x400	24x24x16	719	260	636	230	438.0

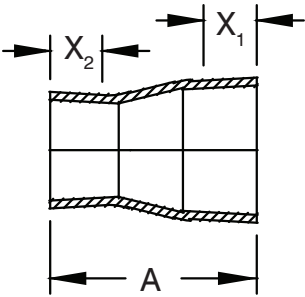
25 Bar Fittings

Reducing Tees (cont.)



Nominal Pipe Size		A	X ₁	B	X ₂	Wgt.
mm	in	mm	mm	mm	mm	kg
600x600x450	24x24x18	719	260	653	200	448.0
600x600x500	24x24x20	719	260	683	230	462.0
700x700x350	28x28x14	847	350	655	170	700.0
700x700x400	28x28x16	847	350	713	230	720.0
700x700x450	28x28x18	847	350	708	200	726.0
700x700x500	28x28x20	847	350	746	230	745.0

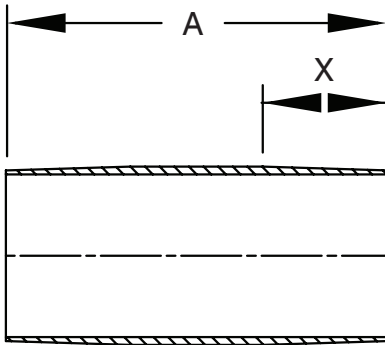
Concentric Reducers



Nominal Pipe Size		A	X ₁	X ₂	Wgt.
mm	in	mm	mm	mm	mm
80x50	3x2	204	80	50	0.9
100x50	4x2	226	80	50	2.7
100x80	4x3	254	80	80	2.0
150x80	6x3	307	110	80	3.9
150x100	6x4	314	110	80	4.2
200x100	8x4	383	140	80	9.5
200x150	8x6	379	140	110	9.5
250x150	10x6	428	170	110	14.5
250x200	10x8	445	170	140	16.0
300x200	12x8	520	200	140	33.0
300x250	12x10	537	200	170	35.0
350x250	14x10	564	170	170	31.0
350x300	14x12	588	170	200	34.0
400x300	16x12	625	230	200	42.0
400x350	16x14	593	230	170	45.0
450x400	18x16	583	200	230	51.0
500x400	20x16	734	230	230	81.0
500x450	20x18	631	230	200	78.0
600x400	24x16	1001	260	230	108.0
600x450	24x18	898	260	200	100.0
600x500	24x20	807	260	230	106.0
700x400	28x16	1376	350	230	264.0
700x450	28x18	1273	350	200	257.0
700x500	28x20	1182	350	230	262.0
700x600	28x24	975	350	260	263.0

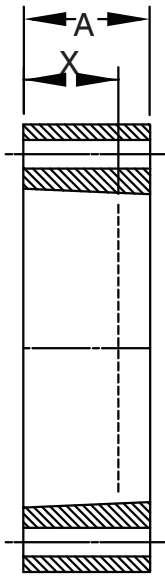
25 Bar Fittings

Nipples



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	125	50	0.1
80	3	185	80	0.2
100	4	185	80	0.3
150	6	245	110	0.8
200	8	310	140	1.5
250	10	370	170	2.9
300	12	440	200	4.7
350	14	380	170	4.6
400	16	500	230	8.6
450	18	460	200	8.6
500	20	520	230	12.4
600	24	580	260	19.0
700	28	760	350	35.0

Heavy-Duty Flanges



Nominal Pipe Size		A	X	Wgt. ⁽²⁾
mm	in	mm	mm	kg
50	2	55	50	1.7
80	3	55	50 ⁽¹⁾	2.6
100	4	85	80	5.9
150	6	85	80 ⁽¹⁾	8.3
200	8	116	110 ⁽¹⁾	15.2
250	10	146	140 ⁽¹⁾	24.0
300	12	176	170 ⁽¹⁾	39.0
350	14	176	170	50.0

Notes:

(1) Insertion depth for subsequent flanges deviates from other fittings.

(2) The weights shown are for ANSI B16.5 Class 150 drilled flanges. Weights for other drilling classes may be different. For more detailed information reference is made to the appropriate product data.

*Heavy Duty Flanges are standard available in drillings according to ANSI and ISO (DIN).

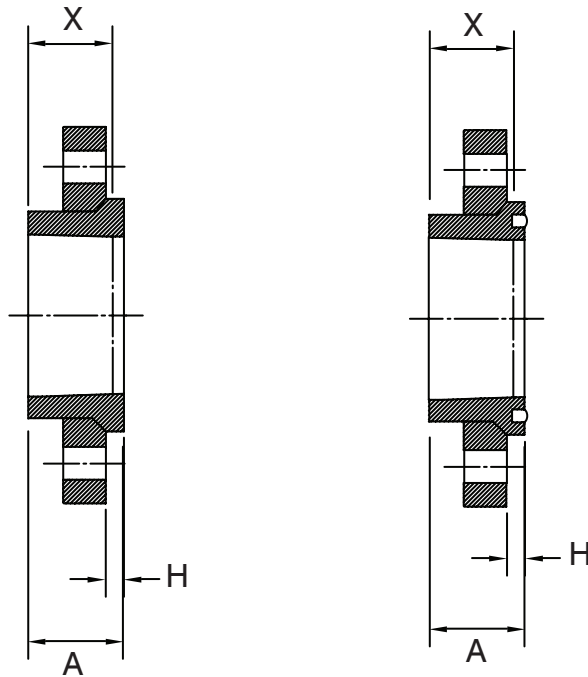
**Full-face elastomeric gaskets may be used, suitable for the service pressure, service temperature and fluid. Shore A durometer hardness of 60±5 is recommended and a thickness of 3 mm.

Compressed fiber gaskets, 3 mm thick, compatible with the pressure, temperature and medium, may also be used. The mechanical properties should be in accordance with DIN 3754 (IT 400) or equal.

***For maximum bolt torque refer to the appropriate Bondstrand literature. Please be aware that excessive torque may result in flange failure and, therefore a torque- wrench is required.

25 Bar Fittings

Stub-End Flanges (Van Stone)



Nominal Pipe Size		A	X	H	Wgt. Stub End	Wgt. Steel Ring ⁽¹⁾
mm	in	mm	mm	mm	kg	kg
50	2	65	50	10	0.2	2.5
80	3	95	80	16	0.7	4.8
100	4	95	80	16	1.1	7.0
150	6	125	110	23	2.3	12.2
200	8	155	140	29	4.0	18.3
250	10	185	170	33	5.5	26.0
300	12	215	200	38	7.6	39.0
350	14	185	170	33	6.5	56.0
400	16	250	230	47	11.6	70.0
450	18	220	200	42	17.9	85.0
500	20	250	230	47	22	107.0
600	24	280	260	57	23	182.0
700	28	370	350	63	26	252.0

Notes:

(1)The weight shown is for ANSI B16.5 Class 150 drilled flanges. Weights for other drilling classes may be different. For more detailed information reference is made to the appropriate product data.

*Stub-End Flange Rings are standard available in drillings according to ANSI and ISO (DIN).

**Stub-End Flanges are available with and without O-ring groove in the face.

Up to 10 bar stub-ends without grooves can be used with flat elastomeric or compressed fibre gaskets.

For pressures 12 bar and above suitable O-ring seals should be used, available on request.

***Make sure that the O-ring grooved stub-end is compatible with its counter flange, e.g. use a stub-end without groove or another flat surface flange as counter flange.

****Maximum bolt-torque for use with O-rings seals may be calculated based on pressure, size and number of bolts. If using flat face gaskets (maximum pressure 10 bar) refer to the appropriate Bondstrand literature for hubbed flanges.

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