

# Fittings & Flanges for 32-50 Bar Pipe Series 2400

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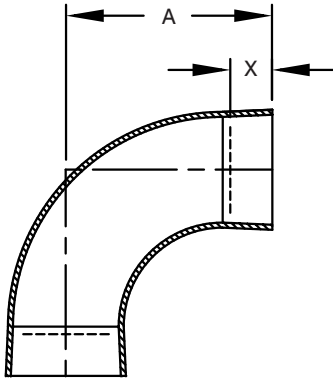
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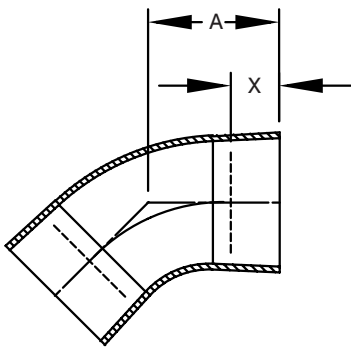
# 32 Bar Fittings

## 90° Elbows



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	594	230	66.0
400	16	632	230	84.0
450	18	732	260	168.0
500	20	813	290	230.0
600	24	975	350	367.0

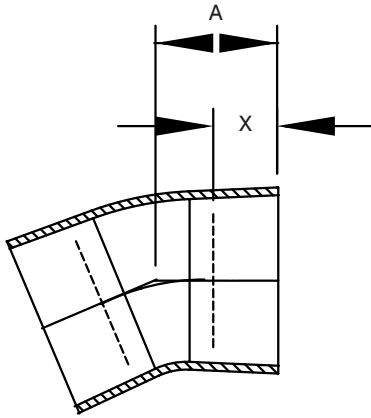
## 45° Elbows



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	45.0
350	14	355	230	58.0
400	16	372	230	80.0
450	18	464	260	115.0
500	20	515	290	157.0
600	24	618	350	281.0

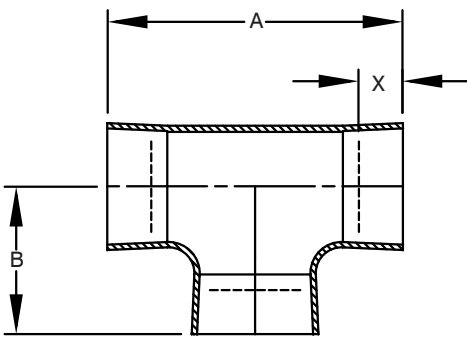
# 32 Bar Fittings

## 22½° Elbows



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	301	230	43.0
400	16	315	230	57.0
450	18	366	260	78.0
500	20	406	290	107.0
600	24	486	350	185.0

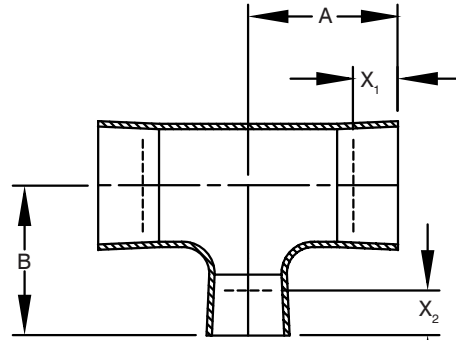
## Tees



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	1004	502	230	106.0
400	16	1050	525	230	126.0
450	18	1198	599	260	293.0
500	20	1320	660	290	398.0
600	24	1568	784	350	682.0

# 32 Bar Fittings

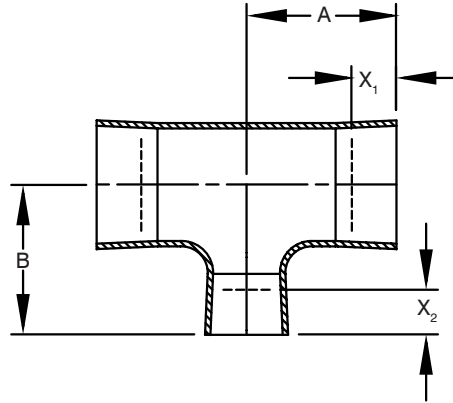
## Reducing Tees



Nominal Pipe Size		A	X <sub>1</sub>	B	X <sub>2</sub>	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	502	230	364	110	92.0
350x350x200	14x14x8	502	230	404	140	96.0
350x350x250	14x14x10	502	230	447	170	102.0
350x350x300	14x14x12	502	230	489	200	106.0
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	545	230	104.0
450x450x200	18x18x8	599	260	456	140	210.0
450x450x250	18x18x10	599	260	499	170	218.0
450x450x300	18x18x12	599	260	529	200	227.0
450x450x350	18x18x14	599	260	560	230	234.0
450x450x400	18x18x16	599	260	560	230	240.0
500x500x250	20x20x10	660	290	525	170	339.0
500x500x300	20x20x12	660	290	555	200	250.0
500x500x350	20x20x14	660	290	586	230	360.0
500x500x400	20x20x16	660	290	586	230	367.0
500x500x450	20x20x18	660	290	525	260	381.0
600x600x300	24x24x12	784	350	605	200	577.0

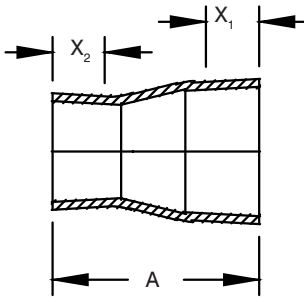
# 32 Bar Fittings

## Reducing Tees cont



Nominal Pipe Size		A	X <sub>1</sub>	B	X <sub>2</sub>	Wgt
mm	in	mm	mm	mm	mm	kg
600x600x350	24x24x14	784	350	636	230	589.0
600x600x400	24x24x16	784	350	636	230	598.0
600x600x450	24x24x18	784	350	688	260	619.0
600x600x500	24x24x20	784	350	716	290	638.0

## Concentric Reducers

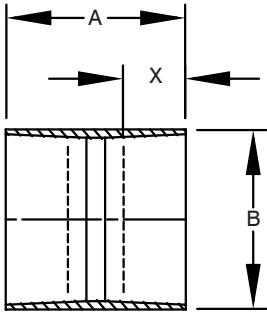


Nominal Pipe Size		A	X <sub>1</sub>	X <sub>2</sub>	Wgt.
mm	in	mm	mm	mm	kg
80x50	3x2	204	80	50	0.9
100x50	4x2	226	80	50	2.7
100x80	4x3	254	80	80	2.8
150x80	6x3	307	110	80	3.9
150x100	6x4	314	110	80	4.2
200x100	8x4	383	140	80	9.5
200x150	8x6	379	140	110	9.5
250x150	10x6	428	170	110	14.5
250x200	10x8	445	170	140	16.0
300x200	12x8	520	200	140	33.0
300x250	12x10	537	200	170	35.0
350x250	14x10	614	230	170	45.0
350x300	14x12	638	230	200	50.0
400x300	16x12	625	230	200	42.0
400x350	16x14	643	230	230	48.0
450x400	18x16	618	260	230	71.0
500x400	20x16	769	290	230	113.0
500x450	20x18	701	290	260	117.0
600x400	24x16	1066	350	230	156.0
600x450	24x18	998	350	260	155.0
600x500	24x20	907	350	290	164.0

Note: Eccentric Reducers are available on request

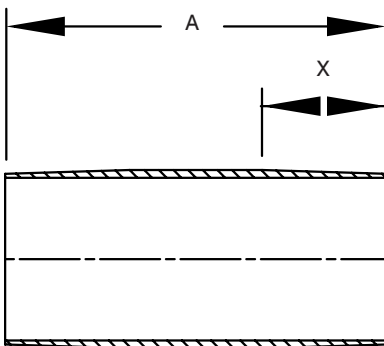
# 32 Bar Fittings

## Couplings



Nominal Pipe Size		A	X	B	Wgt.
mm	in	mm	mm	mm	kg
50	2	170	50	70	0.4
80	3	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	530	230	381	13.2
400	16	530	230	435	17.4
450	18	590	260	472	17.8
500	20	650	290	524	23.0
600	24	770	350	630	41.0

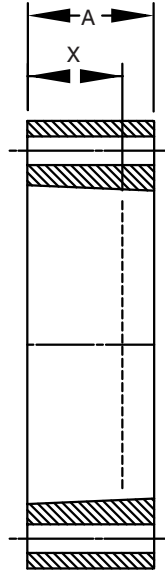
## Nipples



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	1.6
250	10	370	170	3.1
300	12	440	200	5.0
350	14	500	230	7.4
400	16	500	230	9.1
450	18	580	260	12.9
500	20	640	290	17.8
600	24	760	350	30.0

# 32 Bar Fittings

## Heavy-Duty Flanges



Nominal Pipe Size		A	X	Wgt. <sup>(1)</sup>
mm	in	mm	mm	kg
50	2	55	50	1.7
80	3	85	80	4.0
100	4	85	80	5.9
150	6	115	110	11.2
200	8	146	140	19.2
250	10	176	170	28.0

**Notes:**

(1)The weights shown are for ANSI B16.5 Class 300 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).

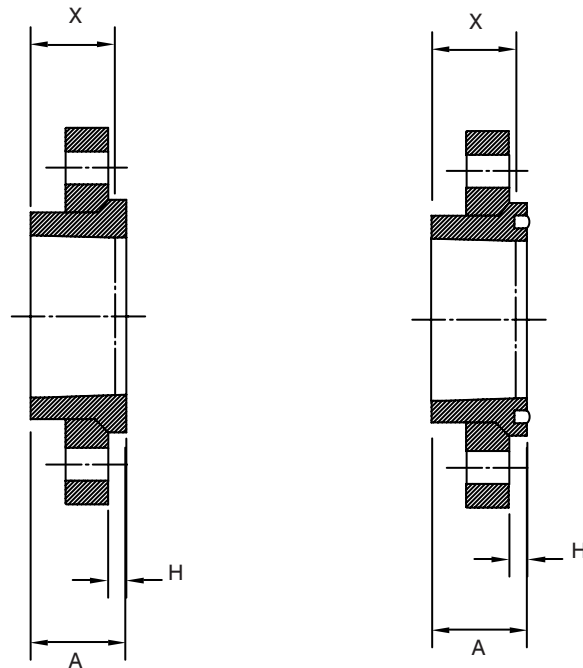
\*\*Full-face elastomeric gaskets may be used, suitable for the service pressure, service temperature and fluid. Shore A durometer hardness of  $60 \pm 5$  is recommended and a thickness of 3 mm.

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.

# 32 Bar Fittings

## Stub-end Flanges (Van Stone)



Nominal Pipe Size		A	X	H	Wgt. Stub End	Wgt. Steel Ring <sup>(1)</sup>
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	245	230	40	7.9	56.0
400	16	250	230	47	11.6	70.0
450	18	280	260	51	22.0	85.0
500	20	310	290	58	26.0	107.0
600	24	370	350	71	29.0	182.0

**Notes:**

(1)The weight shown is for ANSI B16.5 Class 300 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.

Suitable O-ring seals should be used, available on request.

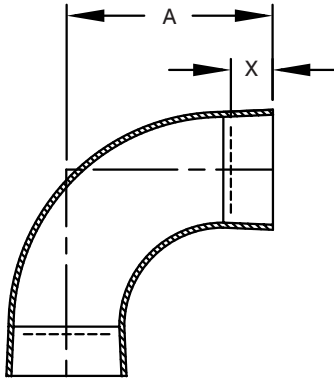
\*\*\*Make sure that the O-ring grooved stub-end is compatible with its counter flange, e.g. use a stub-end without groove or another flat surface flange as counter flange.

\*\*\*\*Maximum bolt-torque for use with O-rings seals may be calculated based on pressure, size and number of bolts.



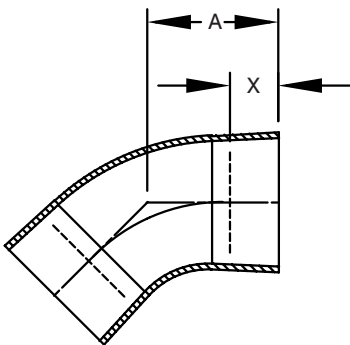
# 40 Bar Fittings

## 90° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	167	80	0.9
80	3	190	80	2.1
100	4	280	110	5.2
150	6	380	140	13.0
200	8	485	170	34.0
250	10	616	200	54.0
300	12	748	260	94.0
350	14	649	260	100.0
400	16	717	290	135.0
450	18	827	320	200.0
500	20	928	380	278.0

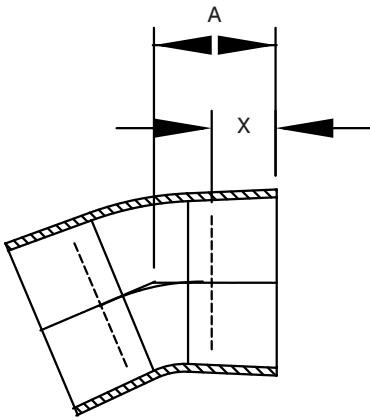
## 45° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	125	80	0.8
80	3	141	80	1.7
100	4	198	110	4.0
150	6	246	140	10.8
200	8	307	170	23.0
250	10	394	200	45.0
300	12	481	260	73.0
350	14	410	260	86.0
400	16	457	290	121.0
450	18	559	320	182.0
500	20	630	380	258.0

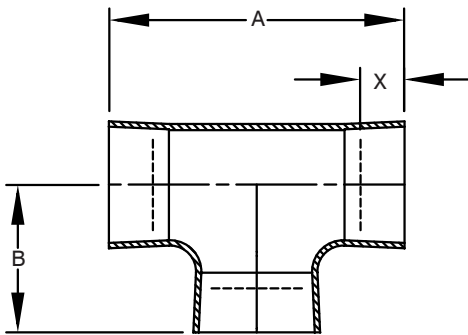
# 40 Bar Fittings

## 22½° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	109	80	0.7
80	3	117	80	1.5
100	4	168	110	3.5
150	6	200	140	9.2
200	8	246	170	16.1
250	10	293	200	30.0
300	12	362	260	54.0
350	14	356	260	64.0
400	16	400	290	87.0
450	18	461	320	126.0
500	20	521	380	181.0

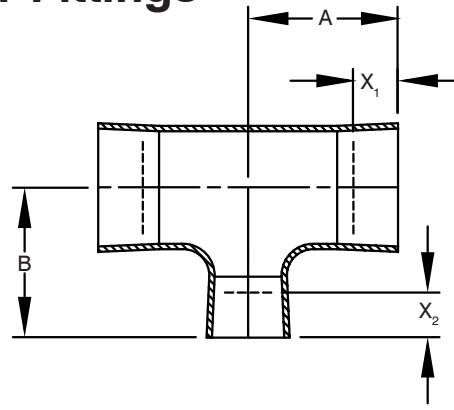
## Tees



Nominal Pipe Size			X	Wgt.
mm	in	mm	mm	kg
50	2	308	154	2.0
80	3	352	176	3.6
100	4	480	240	9.8
150	6	586	293	21.0
200	8	716	358	49.0
250	10	902	451	78.0
300	12	1098	549	136.0
350	14	1114	557	164.0
400	16	1220	610	219.0
450	18	1388	694	388.0
500	20	1550	775	623.0

# 40 Bar Fittings

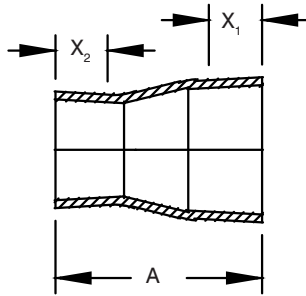
## Reducing Tees



Nominal Pipe Size		A	X <sub>1</sub>	B	X <sub>2</sub>	Wgt.
mm	in	mm	mm	mm	mm	kg
80X80X50	3X3X2	176	80	166	80	3.5
100X100X50	4X4X2	240	110	179	80	8.5
100X100X80	4X4X3	240	110	188	80	8.7
150X150X50	6X6X2	293	140	204	80	18.3
150X150X80	6X6X3	293	140	214	80	19.1
150X150X100	6X6X4	293	140	265	110	21.0
200X200X80	8X8X3	358	170	239	80	39.0
200X200X100	8X8X4	358	170	297	110	41.0
200X200X150	8X8X6	358	170	318	140	44.0
250X250X100	10X10X4	451	200	319	110	62.0
250X250X150	10X10X6	451	200	344	140	66.0
250X250X200	10X10X8	451	200	383	170	70.0
300X300X100	12X12X4	549	260	341	110	107.0
300X300X150	12X12X6	549	260	369	140	111.0
300X300X200	12X12X8	549	260	409	170	116.0
300X300X250	12X12X10	549	260	476	200	125.0
350X350X150	14X14X6	557	260	394	140	134.0
350X350X200	14X14X8	557	260	434	170	140.0
350X350X250	14X14X10	557	260	502	200	150.0
350X350X300	14X14X12	557	260	574	260	163.0
400X400X150	16X16X6	610	290	414	140	176.0
400X400X200	16X16X8	610	290	453	170	182.0
400X400X250	16X16X10	610	290	518	200	193.0
400X400X300	16X16X12	610	290	590	260	206.0
400X400X350	16X16X14	610	290	600	260	137.0
450X450X200	18X18X8	694	320	486	170	317.0
450X450X250	18X18X10	694	320	554	200	3330.0
450X450X300	18X18X12	694	320	614	260	350.0
450X450X350	18X18X14	694	320	615	260	356.0
450X450X400	18X18X16	694	320	645	290	370.0
500X500X250	20X20X10	775	380	580	200	521.0
500X500X300	20X20X12	775	380	640	260	543.0
500X500X350	20X20X14	775	380	641	260	551.0
500X500X400	20X20X16	775	380	671	290	570.0
500X500X450	20X20X18	775	380	720	320	593.0

# 40 Bar Fittings

## Concentric Reducers

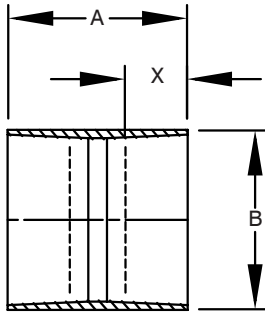


Nominal Pipe Size		A	X <sub>1</sub>	X <sub>2</sub>	Wgt.
mm	in	mm	mm	mm	kg
80X50	3X2	234	80	80	1.4
100X50	4X2	301	110	80	4.2
100X80	4X3	299	110	80	4.3
150X80	6X3	337	140	80	4.4
150X100	6X4	389	140	110	5.0
200X100	8X4	458	170	110	14.2
200X150	8X6	439	170	140	16.5
250X150	10X6	513	200	140	23.0
250X200	10X8	530	200	170	26.0
300X200	12X8	635	260	170	50.0
300X250	12X10	677	260	200	57.0
350X250	14X10	724	260	200	67.0
350X300	14X12	778	260	260	79.0
400X300	16X12	795	290	260	95.0
400X350	16X14	783	290	260	64.0
450X400	18X16	798	320	290	116.0
500X400	20X16	969	380	290	187.0
500X450	20X18	911	380	320	194.0
500X400	20X16	879	290	290	164.0
500X450	20X18	821	290	320	171.0

Note: Eccentric Reducers are available on request

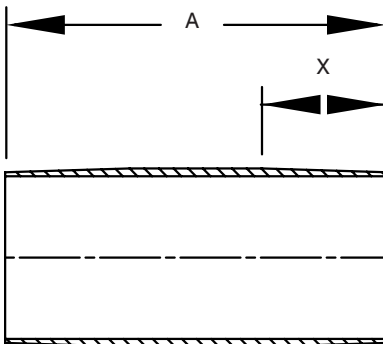
# 40 Bar Fittings

## Couplings



Nominal Pipe Size		A	X	B	Wgt.
mm	in	mm	mm	mm	kg
50	2	230	80	70	0.5
80	3	230	80	100	0.9
100	4	290	110	124	1.3
150	6	350	140	188	3.7
200	8	410	170	238	5.3
250	10	470	200	296	7.9
300	12	590	260	350	12.0
350	14	590	260	390	18.5
400	16	650	290	445	26.0
450	18	710	320	480	24.0
500	20	830	380	544	40.0

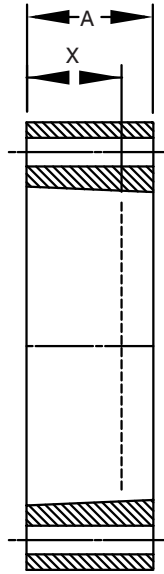
## Nipples



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	185	80	0.1
80	3	185	80	0.2
100	4	245	110	0.5
150	6	305	140	1.3
200	8	370	170	2.5
250	10	430	200	4.8
300	12	560	260	8.8
350	14	560	260	10.3
400	16	620	290	14.6
450	18	700	320	21.0
500	20	820	380	26.0

# 40 Bar Fittings

## Heavy-Duty Flanges



Nominal Pipe Size		A	X <sup>(1)</sup>	Wgt. <sup>(2)</sup>
mm	in	mm	mm	kg
50	2	55	<u>50</u>	1.7
80	3	85	80	4.0
100	4	115	110	7.9
150	6	145	140	14.1

**Notes:**

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

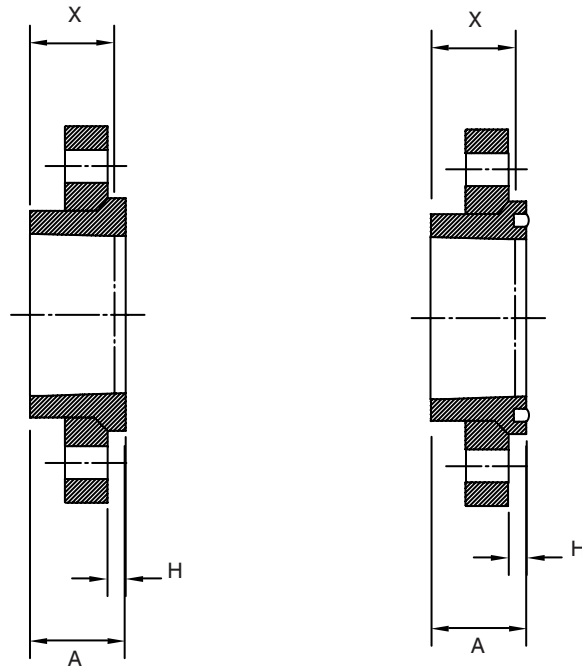
(2) The weights shown are for ANSI B16.5 Class 400 drilled flanges. Weights for other drilling classes may be different. For more detailed information reference is made to the appropriate product data.

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

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

# 40 Bar Fittings

## Stub-end Flanges (Van Stones)



Nominal Pipe Size		A	X	H	Wgt. Stub Ring	Wgt. Steel Ring <sup>(1)</sup>
mm	in	mm	mm	mm	kg	kg
50	2	95	80	14	0.3	2.5
80	3	95	80	16	0.7	4.8
100	4	125	110	19	1.3	7.0
150	6	155	140	27	2.7	12.2
200	8	185	170	35	4.5	18.3
250	10	215	200	40	5.9	26.0
300	12	275	260	46	8.5	39.0
350	14	275	260	49	8.1	56.0
400	16	310	290	58	12.7	70.0
450	18	340	320	62	24	85.0
500	20	400	380	70	28	107.0

**Notes:**

(1)The weight shown is for ANSI B16.5 Class 400 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.

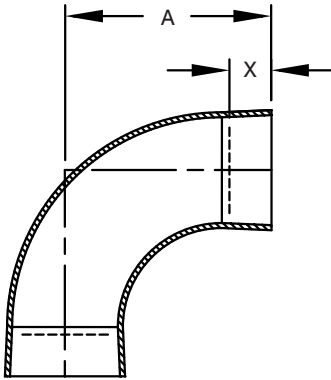
Suitable O-ring seals should be used, available on request.

\*\*\*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.

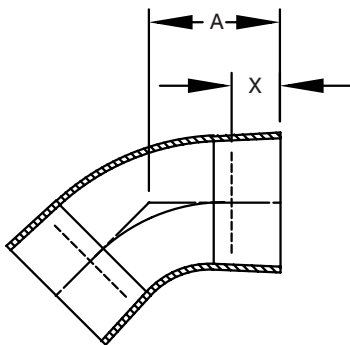
# 50 Bar Fittings

## 90° Elbow



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	167	80	1.1
80	3	235	110	3.4
100	4	330	140	7.0
150	6	420	170	22.0
200	8	540	200	48.0
250	10	676	260	77.0
300	12	753	290	122.0

## 45° Elbows

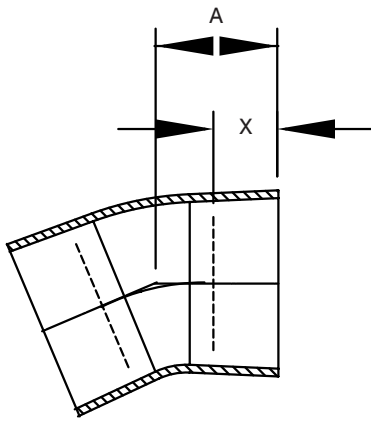


Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	125	80	1.0
80	3	186	110	2.9
100	4	248	140	6.3
150	6	286	170	16.7
200	8	362	200	35.0
250	10	454	260	70.0
300	12	486	290	97.0



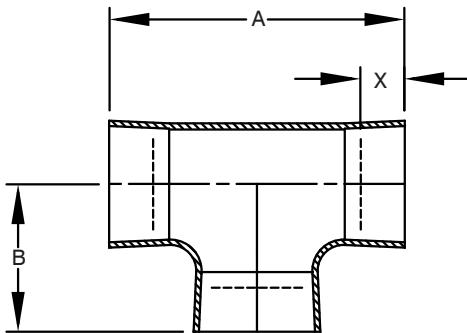
# 50 Bar Fittings

## 22½° Elbows



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	mm
50	2	109	80	0.8
80	3	162	110	2.5
100	4	218	140	5.5
150	6	240	170	14.1
200	8	301	200	24.0
250	10	353	260	48.0
300	12	367	290	74.0

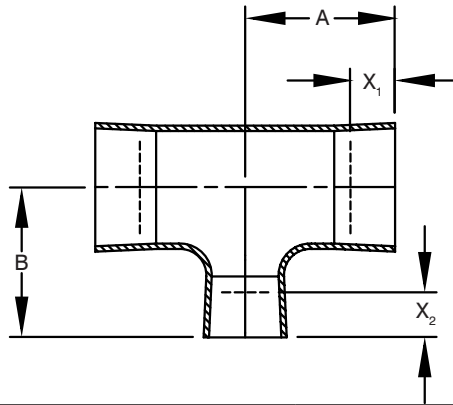
## Tees



Nominal Pipe Size		A	B	X	Wgt.
mm	in	mm	mm	mm	kg
50	2	308	154	80	2.3
80	3	442	221	110	7.3
100	4	580	290	140	16.4
150	6	666	333	170	28.0
200	8	826	413	200	58.0
250	10	1022	511	260	114.0
300	12	1108	554	290	174.0

# 50 Bar Fittings

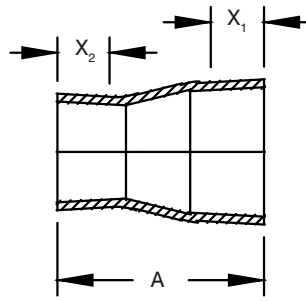
## Reducing Tees



Nominal Pipe Size		A	X <sub>1</sub>	B	X <sub>2</sub>	Wgt.
mm	in	mm	mm	mm	mm	kg
80x80x50	3x3x2	221	110	166	80	6.2
100x100x50	4x4x2	290	140	179	80	12.6
100x100x80	4x4x3	290	140	233	110	13.3
150x150x50	6x6x2	333	170	204	80	21.0
150x150x80	6x6x3	333	170	259	110	23.0
150x150x100	6x6x4	333	170	315	140	25.0
200x200x80	8x8x3	413	200	284	110	46.0
200x200x100	8x8x4	413	200	347	140	49.0
200x200x150	8x8x6	413	200	358	170	52.0
250x250x100	10x10x4	511	260	369	140	92.0
250x250x150	10x10x6	511	260	384	170	96.0
250x250x200	10x10x8	511	260	438	200	103.0
300x300x100	12x12x4	554	290	391	140	138.0
300x300x150	12x12x6	554	290	409	170	144.0
300x300x200	12x12x8	554	290	464	200	153.0
300x300x250	12x12x10	554	290	536	260	165.0

# 50 Bar Fittings

## Concentric Reducers

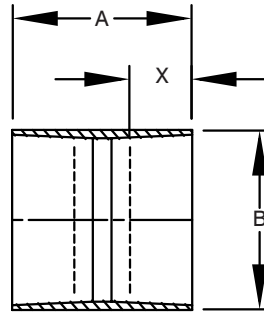


Nominal Pipe Size		A	$X_1$	$X_2$	Wgt
mm	in	mm	mm	mm	mm
80x50	3x2	279	110	80	2.0
100x50	4x2	351	140	80	6.2
100x80	4x3	394	140	110	6.9
150x80	6x3	422	170	110	6.8
150x100	6x4	479	170	140	8.0
200x100	8x4	563	200	140	21.0
200x150	8x6	534	200	170	25.0
250x150	10x6	613	260	170	35.0
250x200	10x8	645	260	200	41.0
300x200	12x8	695	290	200	70.0
300x250	12x10	742	290	260	82.0

Note: Eccentric Reducers are available on request.

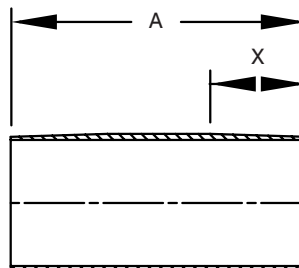
## Couplings

### 50 Bar Fittings



Nominal Pipe Size		A	X	B	Wgt.
mm	in	mm	mm	mm	kg
50	2	230	80	70	0.5
80	3	290	110	100	1.0
100	4	350	140	128	1.8
150	6	410	170	188	3.9
200	8	470	200	242	6.4
250	10	590	260	302	11.1
300	12	650	290	380	31.0

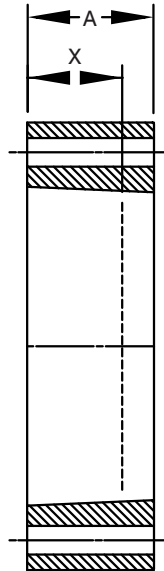
## Nipples



Nominal Pipe Size		A	X	Wgt.
mm	in	mm	mm	kg
50	2	25	80	0.1
80	3	25	110	0.4
100	4	25	140	0.8
150	6	25	170	2.0
200	8	30	200	3.8
250	10	30	260	7.7
300	12	40	290	11.8

# 50 Bar Fittings

## Heavy-Duty Flanges



Nominal Pipe Size		A	X	Wgt <sup>(1)</sup>
mm	in	mm	mm	kg
50	2	85	80	2.6
80	3	115	110	5.4
100	4	145	140	9.8
150	6	175	170	16.5

**Notes:**

(1)The weights shown are for ANSI B16.5 Class 400 drilled flanges. Weights for other drilling classes may be different. For more detailed information reference is made to the appropriate product data.

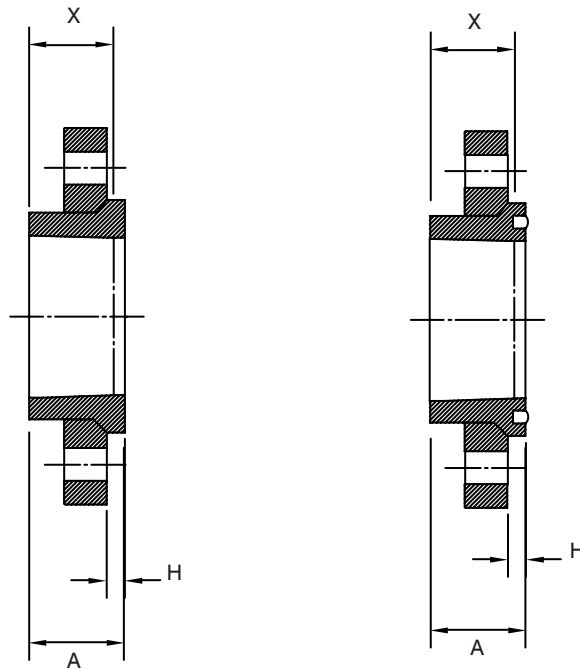
\*Heavy Duty Flanges are standard available in drillings according to ANSI and ISO (DIN).

\*\*Compressed fibre gaskets, 3 mm thick, compatible with the pressure, temperature and medium, may 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.

# 50 Bar Fittings

## Stub-end Flanges (Van Stone)



Nominal Pipe Size		A	X	H	Wgt. Stub End	Wgt. Steel Ring <sup>(1)</sup>
mm	in	mm	mm	mm	kg	kg
50	2	95	80	14	0.3	2.8
80	3	125	110	19	0.8	5.3
100	4	155	140	22	1.6	8.4
150	6	185	170	34	3.0	13.3
200	8	215	200	43	4.8	21.0
250	10	275	260	48	6.7	29.0
300	12	305	290	56	8.6	42.0

**Notes:**

(1)The weight shown is for ANSI B16.5 Class 400 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.

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.



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