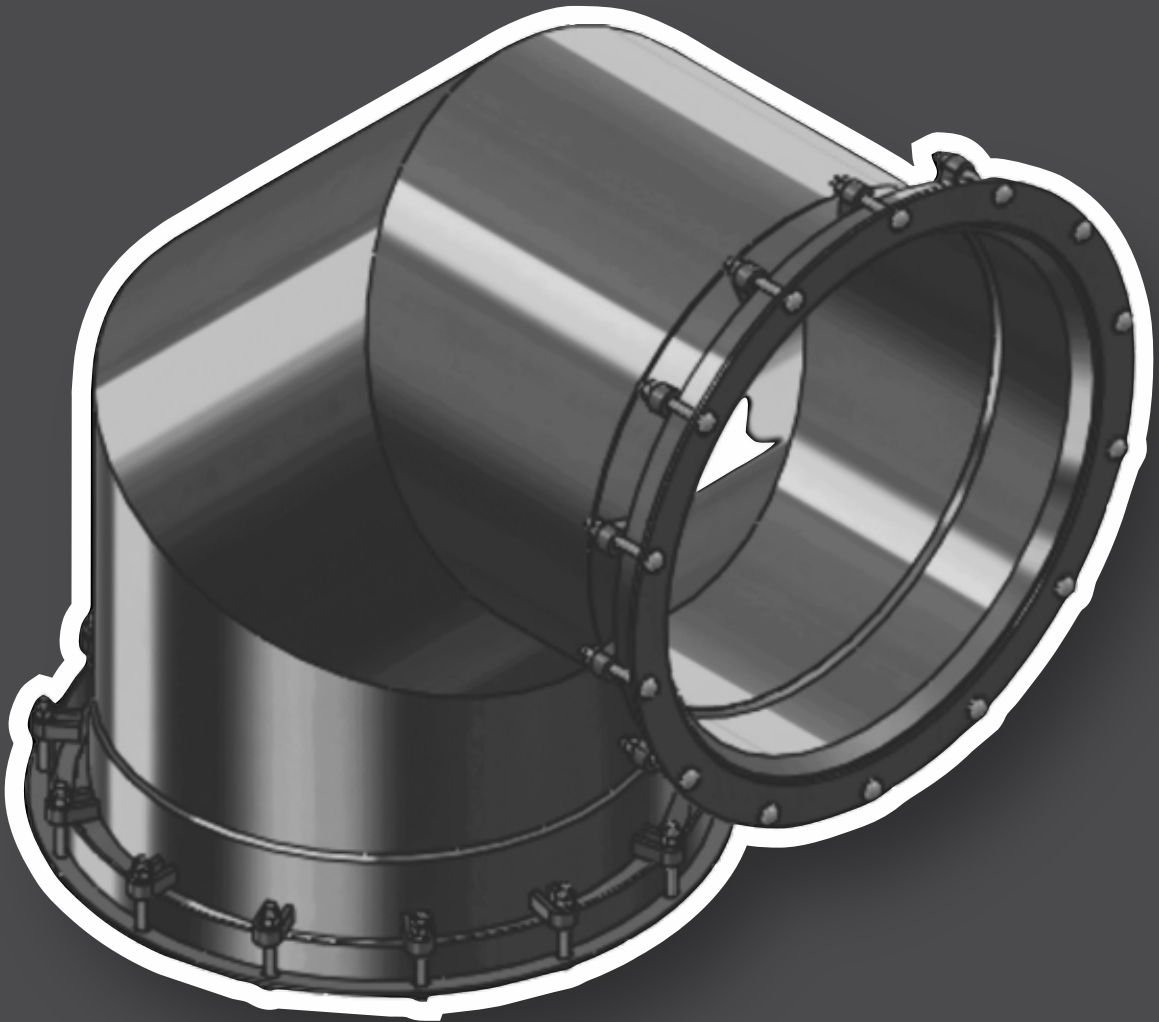


WELBRO
PIPE & COUPLING



FABRICATED PIPE FITTINGS TECHNICAL DATA

Overview

Fabricated steel fittings are used throughout the world in hundreds of different installations. These fittings provide for changes of direction pipelines, the installations of valves and other pipeline components, the joining of pipes and many other uses. Fabricated fittings can by their nature be customised to suit a specific application or requirement as the need may arise. Our technical team has decades of experience and will be able to assist with any requirement.

Types of fittings

Welbro manufactures the following fabricated steel fittings:

- Short Radius Bends
- Medium Radius Bends
- Long Radius Bends
- Standard Tees
- Gusseted Tees
- Lateral Tees
- Sweep Tees
- Duckfoot Bends and Elbows
- Reducers
- Bellmouths

Because Welbro is also a coupling manufacturer, it can supply fabricated steel fittings with built-in couplings to use for pipe connections. This allows these fittings to be connected to almost any pipe material including steel, PVC, GRP, ductile iron and others and negates the need for a separate coupling. It is a cost effective and efficient solution for instances where a connection is otherwise not possible or not available.

Pipe Ends

Welbro can supply fittings with a variety of pipe ends including:

- Flanges
- Socketed Ends
- Built-up Ends
- Plain Ended

Benefits

Socketed ends provide the full benefits of Welbro wide range couplings including

- Wide Range capability meaning the socket can accommodate a wide range of materials and some ovality.
- Ease of installation
- Proper and guaranteed sealing using the standard rubber gaskets used in Welbro couplings
- Corrosion protection

Coatings and linings

Welbro can supply fabricated pipe fittings with the following coatings and linings:

- Fusion Bonded Epoxy
- Two Pack Wet Spray Epoxy
- Hot Dipped Galvanising
- Cement Mortar Lining
- Other coatings or linings that may specified

Overview

Because Welbro is also a coupling manufacturer, it can supply fabricated steel fittings with built-in couplings to use for pipe connections. This allows these fittings to be connected to almost any pipe material including steel, PVC, GRP, ductile iron and others and negates the need for a separate coupling. It is a cost effective and efficient solution for instances where a connection is otherwise not possible or not available.

Types of fittings

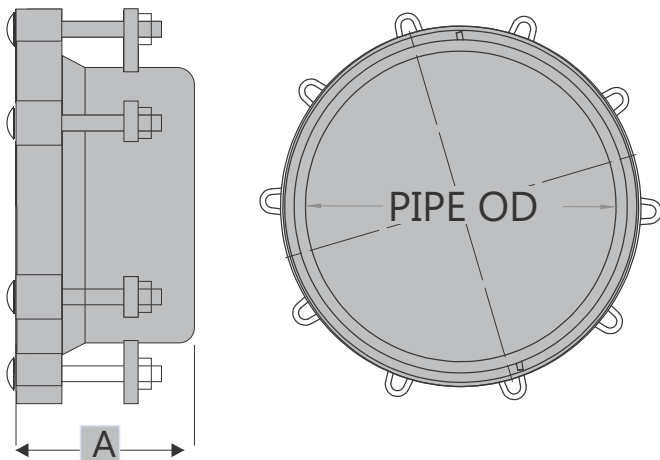
Welbro can supply socketed ends for the following types of fabricated steel fittings:

- Short Radius Bends
- Medium Radius Bends
- Long Radius Bends
- Standard Tees
- Gusseted Tees
- Lateral Tees
- Sweep Tees
- Any special combination of fittings and/or pipe ends

Benefits

Socketed ends provide the full benefits of Welbro wide range couplings including

- Wide Range capability meaning the socket can accommodate a wide range of materials and some ovality.
- Ease of installation
- Proper and guaranteed sealing using the standard rubber gaskets used in Welbro couplings
- Corrosion protection

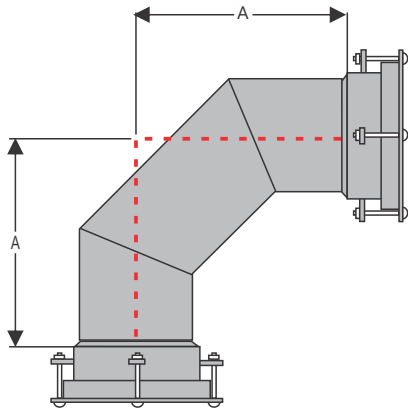


HALF COUPLINGS				HDG FASTENERS				
DN	ID	Range	Gasket Section	Product Code	Sleeve Length	Coupling Height	Fasteners	
							Nr	Size
50	68	57-67	Moulded	WBH0500	100	155	4	M12x115
65	81	59-79	Moulded	WBH0650	100	155	4	M12x115
80	95	74-93	Moulded	WBH0800	100	155	4	M12x115
80/2	106	88-104	Moulded	WBH0802	100	155	4	M12x115
100	121	98-118	Moulded	WBH1000	100	155	4	M12x115
100/2	131	108-128	Moulded	WBH1002	100	155	4	M12x115
125	156	132-154	Moulded	WBH1250	100	155	4	M12x115
150	173.5	150-170	Moulded	WBH1500	100	155	4	M12x115
150/2	121	159-187	Moulded	WBH1502	100	170	4	M12x115
150/3	131	180-200	Medium	WBH1503	100	170	4	M12x115
175	210	192-209	Medium	WBH1750	100	170	4	M12x115
200	225	205-223	Medium	WBH2000	100	170	4	M12x115
200/2	245	218-243	Medium	WBH2002	100	170	4	M12x115
225	256	235-253	Medium	WBH2250	100	170	6	M12x115
250	280	268-278	Medium	WBH2500	100	170	6	M12x115
250/2	299	275-295	Medium	WBH2502	100	170	6	M12x115
275	321	302-318	Medium	WBH2750	100	170	6	M12x115
300	330	315-328	Medium	WBH3000	100	170	6	M12x115
300/2	354	334 - 350	Large	WBH3002	100	190	8	M12x115
300/3	375	356 - 372	Large	WBH3003	100	190	8	M12x115
350	363	344 - 360	Large	WBH3500	100	190	8	M12x115
350/2	394	374-391	Large	WBH3502	100	190	10	M12x115
400	413	391-410	Large	WBH4000	100	190	10	M12x115
400/2	421	401-417	Large	WBH4002	100	190	10	M12x115
400/3	440	417-437	Large	WBH4003	100	190	10	M12x115
400/4	449	430-446	Large	WBH4004	100	190	10	M12x115
450	463	444-460	Large	WBH4500	100	190	12	M12x115
450/2	478	458-474	Large	WBH4502	100	190	12	M12x115
450/3	496	477-493	Large	WBH4503	100	190	12	M12x115
450/4	537	518-534	Large	WBH4504	100	190	12	M12x115
500	513	494-510	Large	WBH4000	100	190	14	M12x115
500/2	549	535-545	Large	WBH5002	100	190	14	M12x115
500/3	596	583-593	Large	WBH5003	100	190	14	M12x115
550	575	559-571	Large	WBH5500	100	190	14	M12x115
600	620	606-616	Large	WBH5000	100	190	14	M12x115
600/2	642	629-638	Large	WBH6002	100	190	14	M12x115

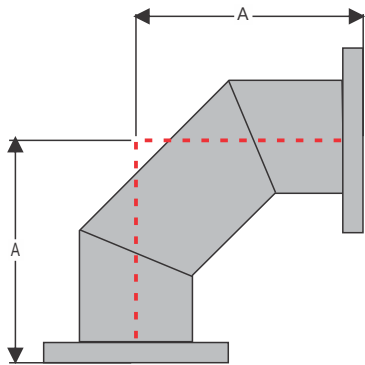
DIMENSIONS

SHORT RADIUS BENDS

45° to 90°

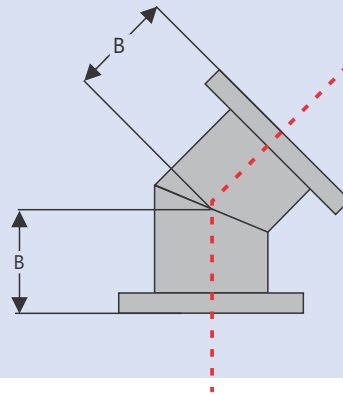
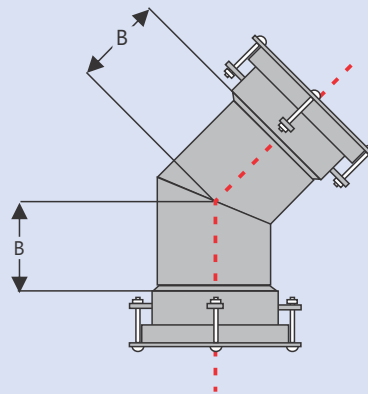


Socketed Ends

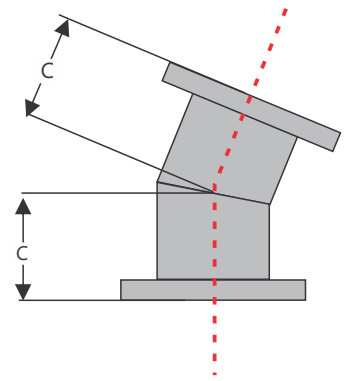
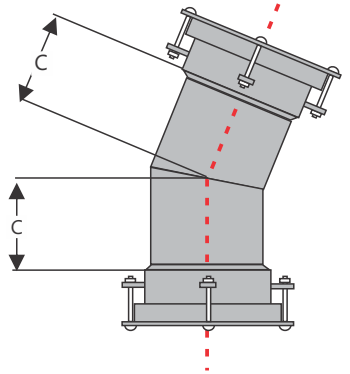


Flanged Ends

22.5° to 45°



Up to 22.5°

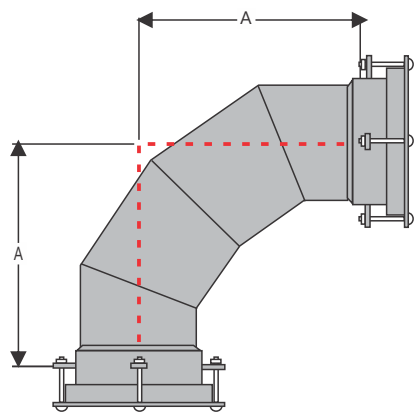


Nominal Bore (mm)	Outside Diameter	Centre to Face			Radius
		A	B	C	R
200	219.1	230	155	115	230
250	273.1	280	180	140	280
300	323.9	305	205	155	305
350	355.6	355	230	180	355
400	406.4	405	255	205	405
450	457	460	280	230	460
500	508	510	305	255	510
550	559	560	330	280	560
600	610	610	355	305	610
650	660	660	380	330	660
700	711	710	405	355	710
750	762	760	430	380	760
800	813	815	460	405	815
850	864	865	485	430	865
900	914	915	510	460	915

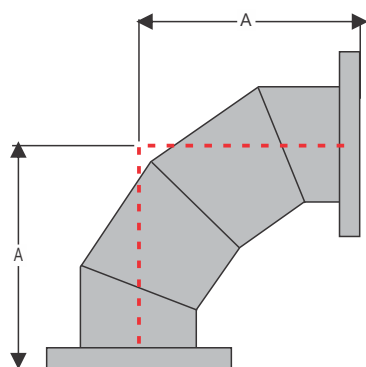
DIMENSIONS

MEDIUM RADIUS BENDS

45° to 90°

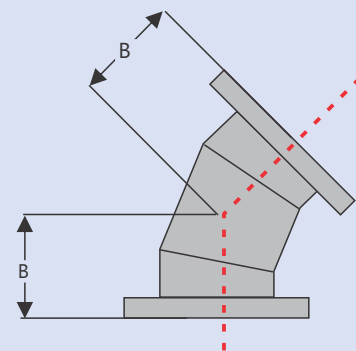
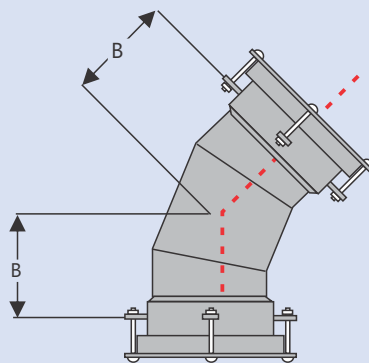


Socketed Ends

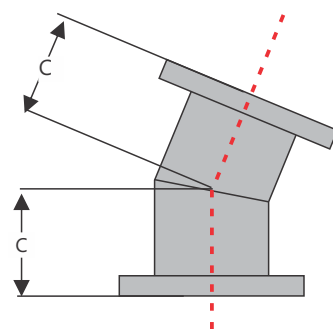
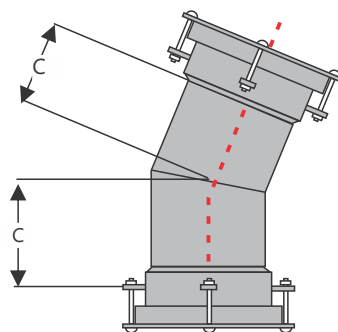


Flanged Ends

22.5° to 45°



Up to 22.5°

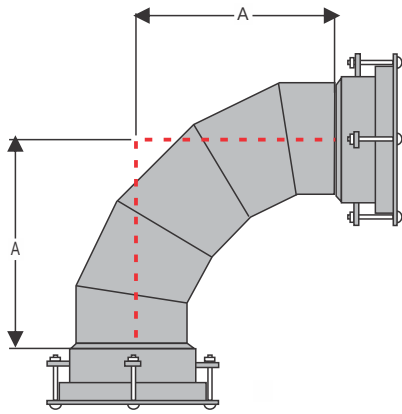


Nominal Bore (mm)	Outside Diameter	Centre to Face			Radius
		A	B	C	R
200	219.1	405	205	140	405
250	273.1	510	255	180	510
300	323.9	610	305	205	610
350	355.6	710	355	240	710
400	406.4	815	405	280	815
450	457	915	460	305	915
500	508	1020	510	345	1020
550	559	1120	560	380	1120
600	610	1220	610	405	1220
650	660	1320	660	445	1320
700	711	1420	710	485	1420
750	762	1520	760	510	1520
800	813	1630	815	545	1630
850	864	1730	865	585	1730
900	914	1830	915	610	1830

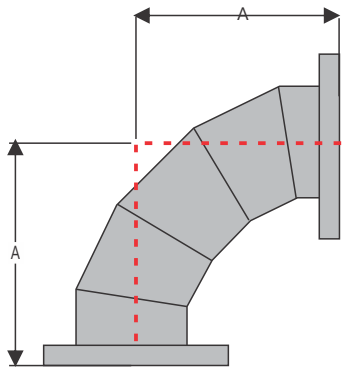
DIMENSIONS

LONG RADIUS BENDS

45° to 90°

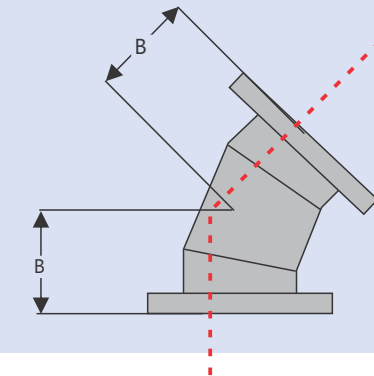
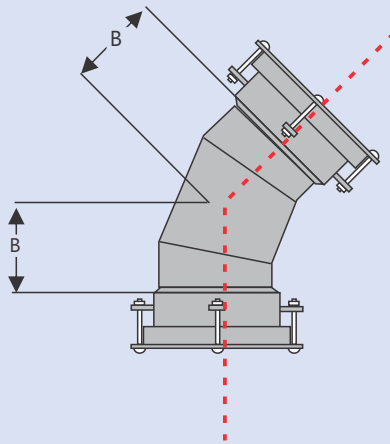


Socketed Ends

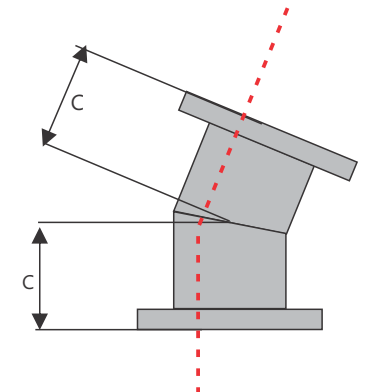
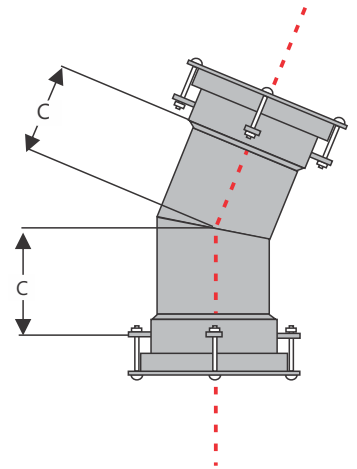


Flanged Ends

22.5° to 45°

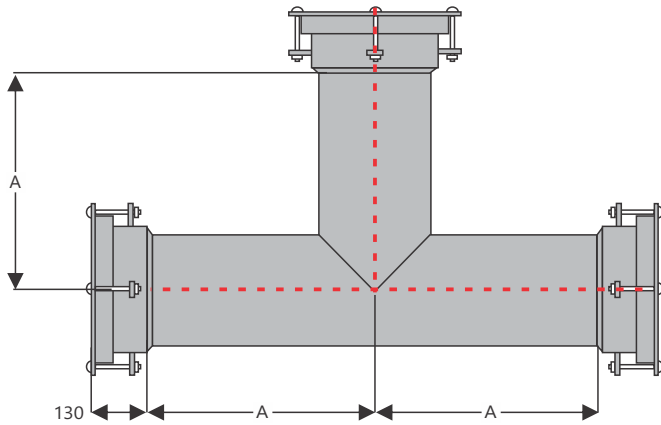


Up to 22.5°

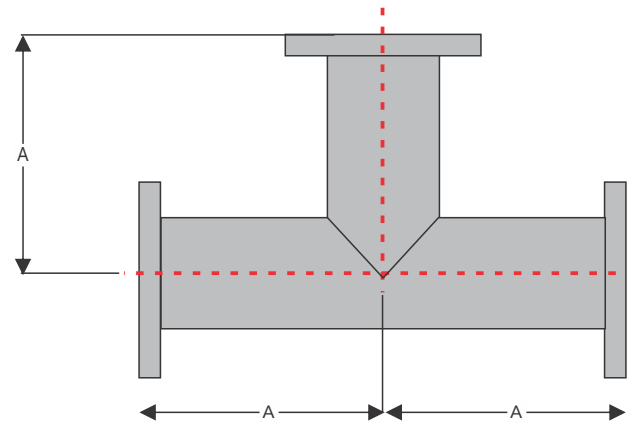


Nominal Bore (mm)	Outside Diameter	Centre to Face			Radius
		A	B	C	R
200	219.1	610	405	205	610
250	273.1	760	510	255	760
300	323.9	915	610	305	915
350	355.6	1065	710	355	1065
400	406.4	1215	815	405	1215
450	457	1380	915	460	1380
500	508	1530	1020	510	1530
550	559	1680	1120	560	1680
600	610	1830	1220	610	1830
650	660	1980	1320	660	1980
700	711	2130	1420	710	2130
750	762	2280	1520	760	2280
800	813	2445	1630	815	2445
850	864	2595	1730	865	2595
900	914	2745	1830	915	2745

Socketed Ends

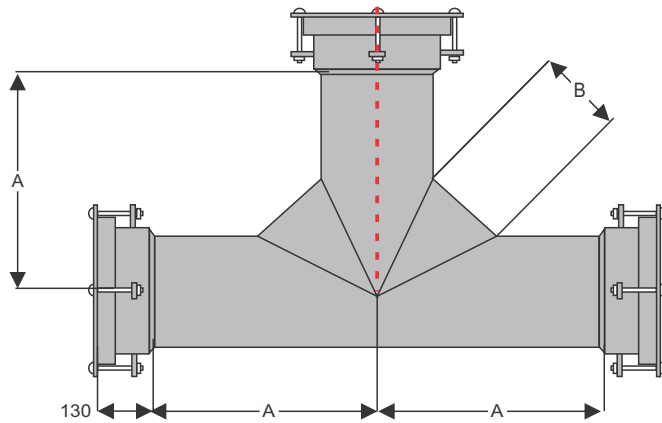


Flanged Ends

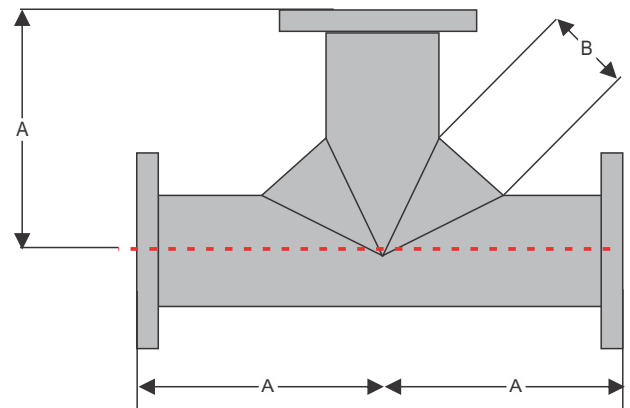


Nominal Bore (mm)	Outside Diameter	Dimensions
		A
200	219.1	230
250	273.1	280
300	323.9	305
350	355.6	355
400	406.4	405
450	457	460
500	508	510
550	559	560
600	610	610
650	660	660
700	711	710
750	762	760
800	813	815
850	864	865
900	914	915

Socketed Ends



Flanged Ends



Nominal Bore (mm)	Outside Diameter	Dimensions	
		A	B
200	219.1	355	102
250	273.1	405	127
300	323.9	460	155
350	355.6	510	180
400	406.4	560	205
450	457	610	230
500	508	660	255
550	559	710	280
600	610	760	305
650	660	815	330
700	711	865	355
750	762	915	380
800	813	970	405
850	864	1020	430
900	914	1070	460

1. End Rings

Mild Steel to BS EN 10025:2004 or Grade CQ

2. Half Coupling Sleeve

Mild Steel to BS EN 10025:2004 or Grade CQ

3. Rubber Gasket

EPDM Grade E to BS 2494 1990 or SANS974 Related ISO4633

4. Bolts

Steel to BS970 Grade 070

DN50 to DN600/2: M12 x 120 Bolts and Nuts

Studs are of square cup design to enable one-handed tightening

Bolts are hot dipped galvanised to SANS763

5. Coating

Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns

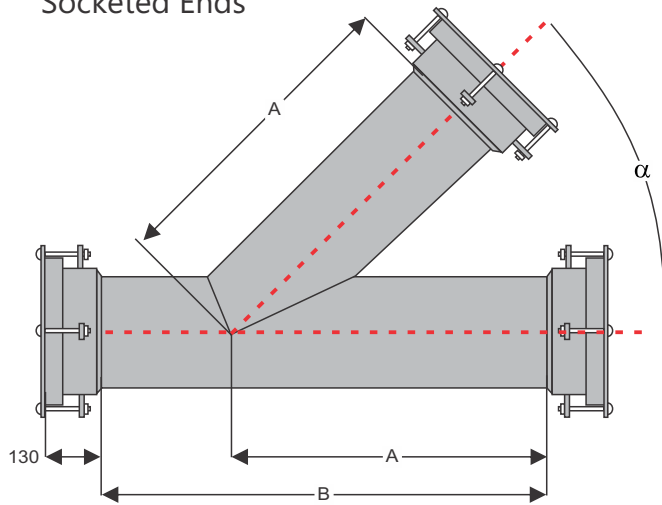
6. SABS Standard

Compliant with SANS1808-2: 2017

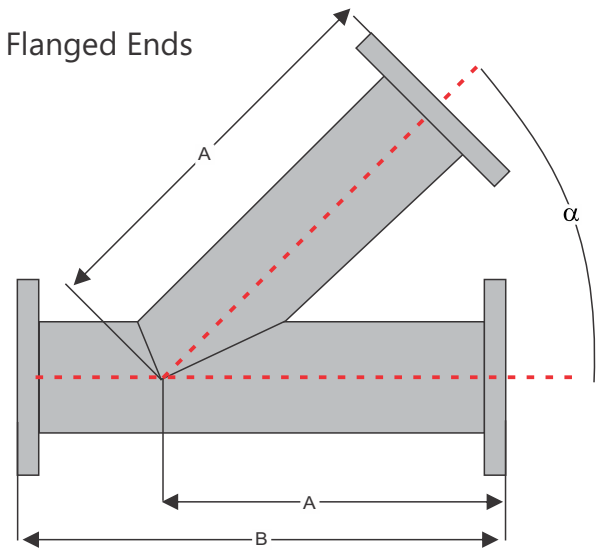
DIMENSIONS

LATERAL TEES

Socketed Ends



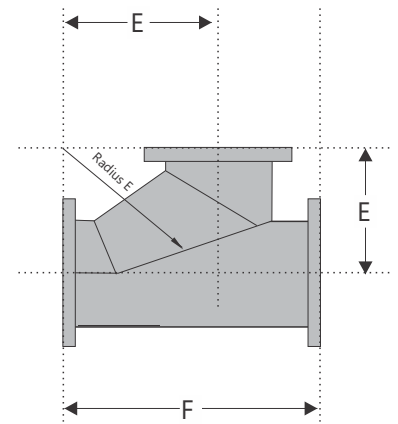
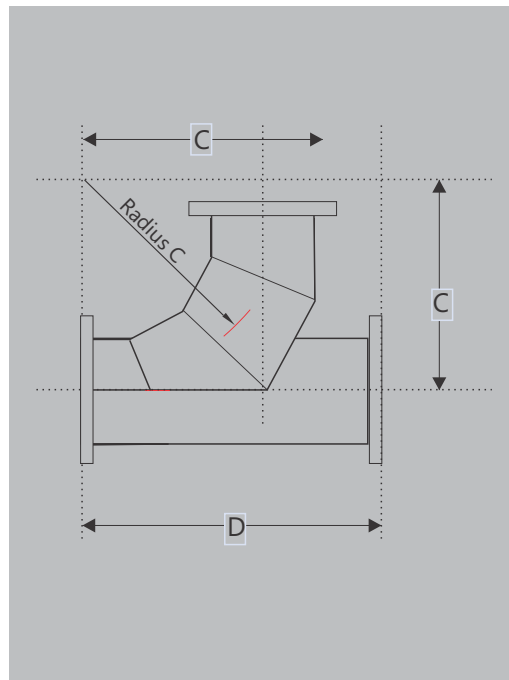
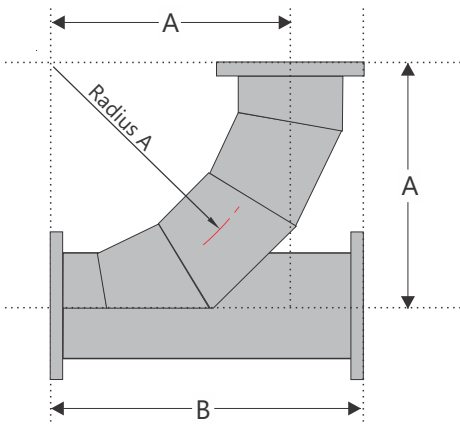
Flanged Ends



Nominal Bore (mm)	Outside Diameter	Angle = 60°		Angle = 45°		Angle = 30°	
		A	B	A	B	A	B
200	219.1	430	610	610	710	815	915
250	273.1	485	685	685	815	940	1065
300	323.9	535	760	760	915	1005	1220
350	355.6	585	840	840	1020	1195	1370
400	406.4	635	915	915	1120	1320	1520
450	457	685	990	990	1220	1450	1670
500	508	740	1065	1065	1320	1575	1830
550	559	790	1140	1140	1420	1700	1980
600	610	840	1220	1220	1520	1830	2130
650	660	890	1295	1295	1630	1955	2280
700	711	940	1370	1370	1730	2080	2430
750	762	990	1445	1445	1830	2210	2595
800	813	1045	1520	1520	1930	2335	2745
850	864	1095	1595	1595	2030	2465	2895
900	914	1145	1670	1670	2130	2595	3040

DIMENSIONS

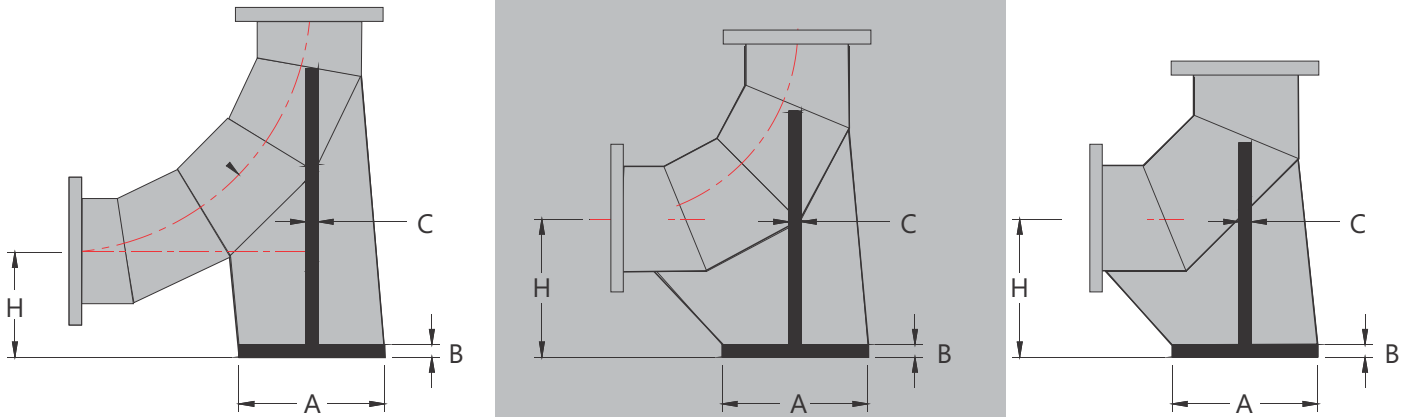
SWEEP TEES



Nominal Bore (mm)	Outside Diameter	Long Radius		Medium Radius		Short Radius		
		A	B	C	D	E	F	R
200	219.1	610	815	405	610	230	430	205
250	273.1	760	1020	510	760	280	535	255
300	323.9	915	1220	610	915	305	610	280
350	355.6	1070	1420	710	1070	355	710	330
400	406.4	1215	1630	815	1215	405	810	380
450	457	1380	1830	915	1380	460	920	430
500	508	1530	2040	1020	1530	510	1020	485
550	559	1680	2240	1120	1680	560	1120	535
600	610	1830	2440	1220	1830	610	1220	585
650	660	1980	2640	1320	1980	660	1320	635
700	711	2130	2840	1420	2130	710	1420	685
750	762	2280	3040	1520	2280	760	1520	740
800	813	2445	3260	1630	2445	815	1630	790
850	864	2595	3460	1730	2595	865	1730	840
900	914	2745	3660	1830	2745	915	1830	890

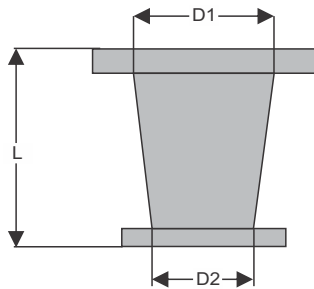
DIMENSIONS

DUCKFOOT ELBOWS AND BENDS

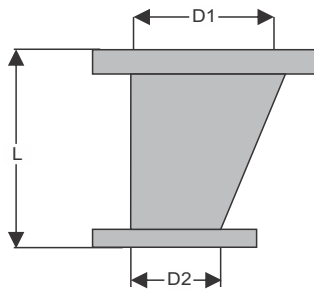


Nominal Bore (mm)	Outside Diameter	A	Base		Ribs	
			Width	B	C	H
200	219.1	355	230	10	6	255
250	273.1	405	280	10	6	280
300	323.9	460	330	10	6	305
350	355.6	510	380	12	8	330
400	406.4	560	430	12	8	355
450	457	610	485	12	8	380
500	508	660	535	14	10	405
550	559	710	585	14	10	430
600	610	760	635	14	10	460
650	660	815	693	16	12	485
700	711	865	733	16	12	510
750	762	915	793	16	12	535
800	813	970	833	18	14	560
850	864	1020	883	18	14	585
900	914	1070	933	18	14	610

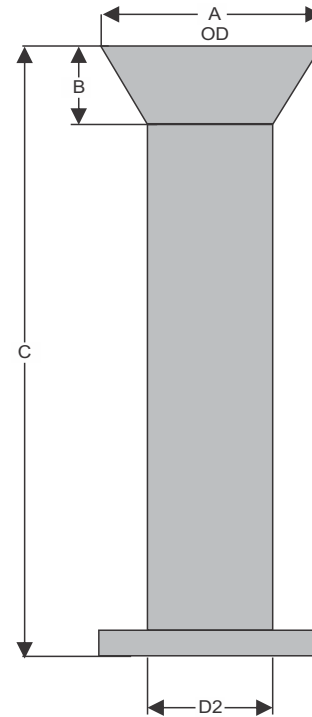
Concentric Reducer



Eccentric Reducer



Bellmouth



Nominal Bore (mm) DN1	Outside Diameter	DN2	Length
200	219.1	102-180	180
250	273.1	155-230	205
300	323.9	180-280	230
350	355.6	230-330	255
400	406.4	255-380	280
450	457	305-430	305
500	508	330-485	330
550	559	355-535	355
600	610	405-585	380
650	660	430-635	405
700	711	485-685	430
750	762	510-740	460
800	813	560-740	485
850	864	585-840	510
900	914	635-890	535

Nominal Bore (mm) DN2	Outside Diameter	A	B
200	219.1	305	102
250	273.1	380	127
300	323.9	460	155
350	355.6	535	180
400	406.4	610	205
450	457	685	230
500	508	760	255
550	559	840	280
600	610	915	305
650	660	990	330
700	711	1065	335
750	762	1140	380
800	813	1220	405
850	864	1295	430
900	914	1380	460

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