

# *A1 Bridge Flue Systems*

*Twin Wall Flue Systems  
4 Hour Fire Rated*





## TWIN WALL FLUE SYSTEMS

All our products are manufactured, and where required, installed within the scope of ISO 9001 : 2000 quality assurance system.

The full range of twin wall flue systems are all fully welded and available with air gap or insulated annulus' varying in size (25mm - 100mm).

Although relatively low external skin temperatures can be obtained, through selection of the correct annulus thickness, dependant on the flue gas temperature a minimum 50mm clearance must be maintained from the outer skin to all combustible materials.

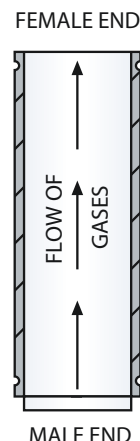
This catalogue provides all the dimensional details for products with internal diameters from 100mm - 1000mm.

### INSTALLATION INSTRUCTIONS

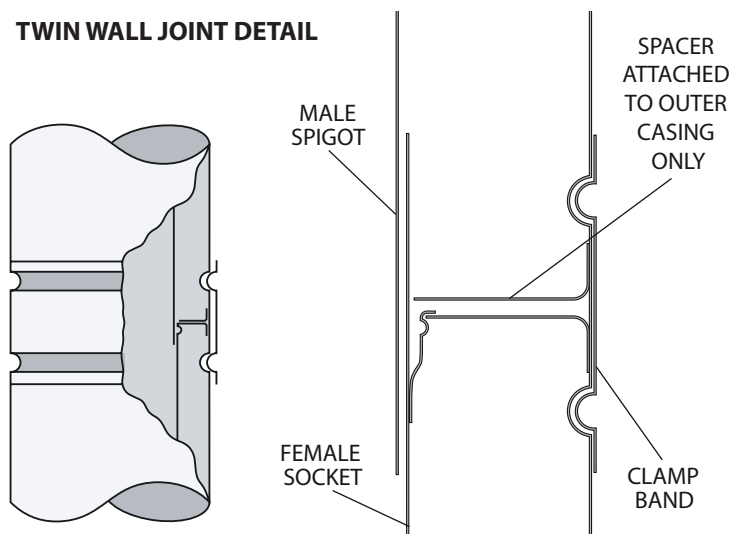
All component parts of the selected flue system are connected with the female end uppermost. Jointing integrity is achieved by simply pushing the two sections together and is secured by means of a clamp band which locates into the inner swages on the outer casing.

In a vertical application it is essential that components are installed with male spigot down against the flow of gases. This is to allow condensates, if any, to remain within the flue.

A four hour fire rating applies to all our twin wall chimney systems constructed from twin wall stainless steel or twin wall stainless steel / Aluzinc. This fire rating is issued by the Loss Prevention Council where our products have been tested in accordance with B.S. 476 PART 20.



### TWIN WALL JOINT DETAIL



### BISRIA TEST RESULTS

#### Twin Wall Chimney System - Classification and Designation

Standard	Temperature class	Pressure class	Resistance to condensate class	Corrosion resistance class	Sootfire resistance class
<b>BSEN1856-1</b>	T450	N1	D	VmL20056 or VmL50056	G (50)

#### Single Wall Chimney System - Classification and Designation

Standard	Temperature class	Pressure class	Resistance to condensate class	Corrosion resistance class	Sootfire resistance class
<b>BSEN1856-2</b>	T450	N1	D	VmL50056	G (50)

### SINGLE WALL FLUE COMPONENTS

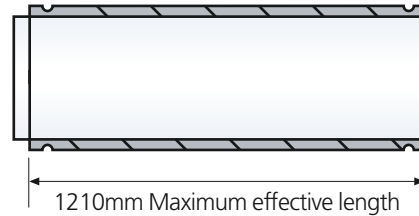
The installed dimensions of our fully welded SF Single Wall flue components (available in either 304 or 316 Grade S/S) are identical to those detailed in this catalogue for our Twinwall TF1V and HG1V Range, obviously the external dimensions will differ, therefore care should be taken when ordering bracketry to ensure size suitability.



## TWINWALL COMPONENTS

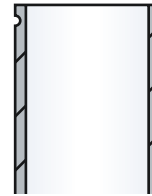
### STRAIGHT LENGTHS

Straight lengths are available as standard in 150mm, 300mm, 420mm, 570mm, 760mm, 875mm, and 1210mm lengths, with exception to 100mm diameter pipe which has a maximum effective length of 875mm these are all the installed effective lengths. We also manufacture any fixed length between the standard lengths to your specification.



### ADJUSTABLE LENGTHS

The adjustable length fits onto the female end of our straight lengths of flue, thus becoming telescopic to give the exact length of pipe required. When the adjustable length is in position it is then fixed by means of a clamp band which is supplied.



### CLAMP BANDS

Fixed to the outer skin at each joint to lock the components in position. Clamp bands are 100mm wide for all diameters.



### STEPPED ADAPTER

Used when a change in diameter is required over a minimum length. Please specify diameters required.



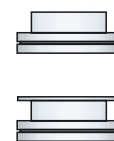
### REDUCER / INCREASER

This component also changes the diameter of the flue, but with a more steady transition to limit resistance.



### APPLIANCE ADAPTERS

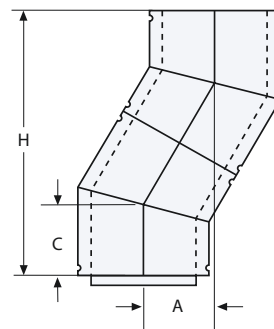
Designed to adapt to any spigot or flange. Manufactured to your requirements.



## ELBOWS

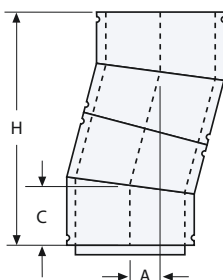
Elbows are used when a change in direction is required within a flue system. Two elbows can be used to make up an offset, by incorporating various straight lengths and adjustable lengths. Offsets can be tailor made to suit your requirements. It should always be remembered that elbows DO NOT LOAD BEAR. All dimensions relate to 25mm annulus flue. Dimensions for other annulus sizes are available on request.

30°



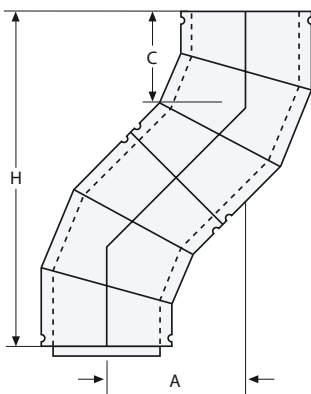
I/D	CENTRE	MIN	A (std)	H (std)
100	83	75	83	310
125	90	79	90	336
150	93	82	93	347
175	95	85	95	355
200	100	90	100	373
225	102	93	102	380
250	140	102	140	522
300	145	108	145	541
350	152	115	152	567
400	162	122	162	605
450	168	128	168	627
500	175	135	175	653
550	180	140	180	672
600	240	160	240	896
650	250	170	250	933
700	255	180	255	952
750	-	207	207	773
800	-	214	214	799
850	-	221	221	825
900	-	227	227	847
950	-	234	234	873
1000	-	241	241	899

15°



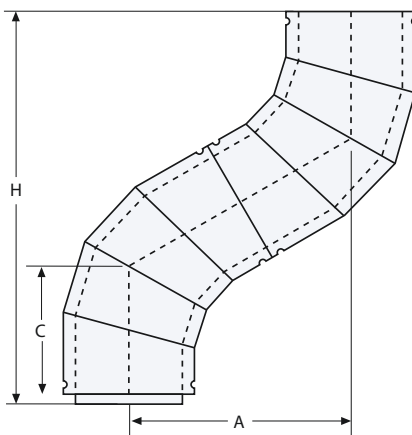
I/D	CENTRE	MIN	A (std)	H (std)
100	70	65	36	274
125	74	69	38	290
150	76	69	39	298
175	80	70	41	313
200	83	72	43	327
225	85	74	44	334
250	120	77	62	471
300	127	84	65	497
350	130	87	67	510
400	133	91	68	520
450	137	94	71	539
500	140	97	72	549
550	144	101	74	564
600	198	114	102	777
650	204	123	106	804
700	208	125	107	815
750	-	153	79	586
800	-	156	81	614
850	-	159	82	624
900	-	163	84	640
950	-	166	86	653
1000	-	169	87	663

45°



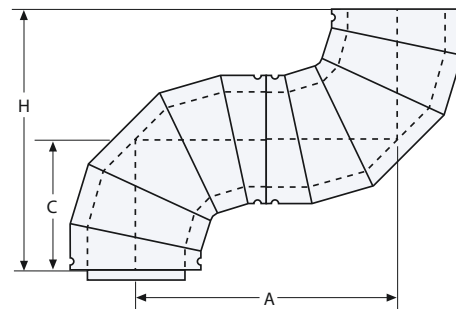
I/D	CENTRE	MIN	A (std)	H (std)
100	114	90	161	389
125	120	95	170	410
150	124	100	175	423
175	130	105	184	444
200	136	110	192	464
225	142	115	201	485
250	184	130	260	628
300	204	135	288	696
350	213	150	301	727
400	225	160	318	768
450	235	175	332	802
500	246	195	348	840
550	358	200	506	1222
600	370	210	523	1263
650	380	230	537	1297
700	390	240	551	1331
750	-	320	453	1093
800	-	330	467	1127
850	-	341	482	1164
900	-	351	496	1198
950	-	361	511	1233
1000	-	372	526	1270

60°



I/D	CENTRE	MIN	A (std)	H (std)
100	148	115	256	444
125	156	120	270	468
150	163	125	282	489
175	170	130	294	510
200	178	140	308	534
225	186	150	322	558
250	234	160	403	702
300	262	170	454	786
350	276	200	478	828
400	392	220	506	876
450	305	230	528	915
500	320	240	554	960
550	334	260	576	1002
600	426	300	737	1278
650	442	320	765	1326
700	454	340	786	1362
750	-	446	631	1256
800	-	461	652	1298
850	-	476	673	1341
900	-	489	692	1378
950	-	504	712	1420
1000	-	519	734	1462

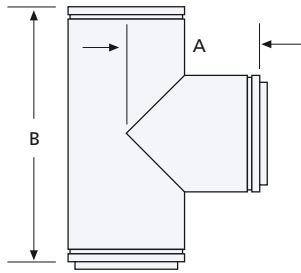
90°



DIA	STD	MIN	A (std)	H (std)
100	190	155	380	380
125	203	173	406	406
150	216	180	432	432
175	230	195	460	460
200	235	210	470	470
225	255	225	510	510
250	305	255	610	610
300	362	280	724	724
350	388	310	776	776
400	413	335	826	826
450	458	375	916	916
500	508	430	1016	1016
550	560	480	1120	1120
600	610	510	1220	1220
650	660	560	1320	1320
700	710	610	1420	1420
750	-	772	1544	1544
800	-	798	1596	1596
850	-	824	1648	1648
900	-	847	1694	1694
950	-	873	1746	1746
1000	-	899	1798	1798

## TEES

(NON STANDARD TEES ARE AVAILABLE TO ORDER)



### 90° TEES

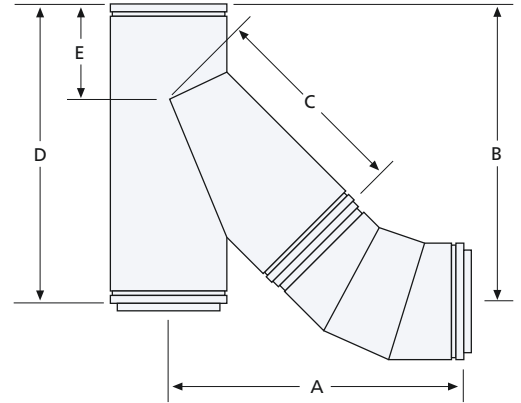
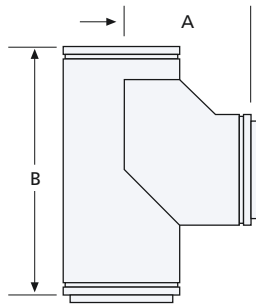
The 90° tee is used at the base of a vertical rise. A drain tee cap or clean out door can be supplied for inspection or cleaning. This equal tee can be supplied with a reduced branch on request.

### 135° TEES

The 135° tee is also used at the base of a rise but given the added advantage of a swept entry to reduce resistance to the flow of flue gases. This equal tee can be supplied with a reduced branch and at any angle.

$$A = C + \text{Elbow } C/L \times \text{Cos}45 + \text{Elbow } E$$

$$B = C + \text{Elbow } C/L \times \text{Cos}45 + \text{Elbow } E$$

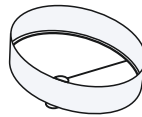


### 90° BOOTED TEE

90° tees can be manufactured with a booted joint so as to reduce resistance around the transition.

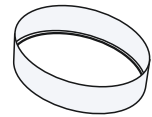
### DRAIN TEE CAP

These caps are positioned to close off the unused opening on the underside of the base tee. The cap is manufactured with a threaded end drain for which pipework can be attached to dispose of any condensate build up which could have occurred. The caps can be easily removed for cleaning access.



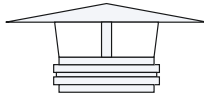
### CLEAN OUT DOOR

These doors are fixed at the open end(s) of the header system to enable cleaning and inspection.



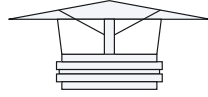
DIA	90° TEES		135° TEES					90° BOOTED TEE	
	A	B	A	B	C	D	E	C	E
100	170	340	386	-	270	395	125	225	150
125	185	370	417	427	300	430	130	235	163
150	197	394	445	456	330	465	135	250	175
175	210	420	476	486	360	500	140	263	188
200	222	444	508	517	390	535	145	275	200
225	235	470	539	547	420	575	150	288	213
250	254	508	643	614	465	625	155	300	225
300	280	560	723	684	530	700	165	325	250
350	305	610	777	739	585	765	175	350	275
400	380	760	879	889	700	945	235	375	300
450	406	812	939	944	760	1010	240	400	325
500	432	864	1000	1004	820	1085	250	425	350
550	458	916	1233	1135	880	1155	260	450	375
600	482	964	1296	1195	940	1225	270	475	400
650	508	1016	1359	1259	1005	1295	280	500	425
700	534	1068	1419	1319	1065	1365	290	525	450
750	550	1100	-	-	-	-	-	550	475
800	575	1150	-	-	-	-	-	575	500
850	590	1180	-	-	-	-	-	600	525
900	590	1180	-	-	-	-	-	-	-
950	590	1180	-	-	-	-	-	-	-
1000	590	1180	-	-	-	-	-	-	-

## TERMINALS AND EXTERNAL FITTINGS



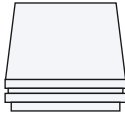
### RAIN CAP TERMINAL

Provides a weather protected vent to atmosphere.



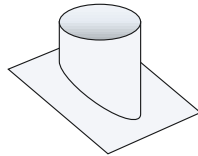
### DOUBLE INVERTED RAIN CAP

Designed for use on induced draught systems to prevent back pressure within the flue.



### TOP STUB TERMINAL

Provides an unrestricted vent to atmosphere. Also supplied to order with a reduced diameter outlet to increase exhaust velocity.



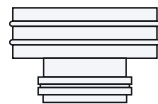
### FLAT / ANGLED FLASHING

Suitable on flat or slate roofs. Please specify the roof pitch.



### STORM COLLAR

Fitted above the flashing to prevent water entering in between the outer skin of the flue and the flashing.



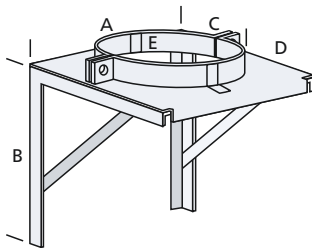
### UNIVERSAL TERMINAL

Designed for use with atmospheric gas burning appliances with a restrictive outlet to prevent bird access. For sizes 100mm - 350mm maximum.

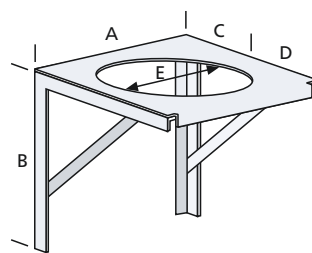
## TWIN WALL SUPPORT COMPONENTS

For single skin use one diameter down

### INTERMEDIATE WALL SUPPORT



### BASE WALL SUPPORT

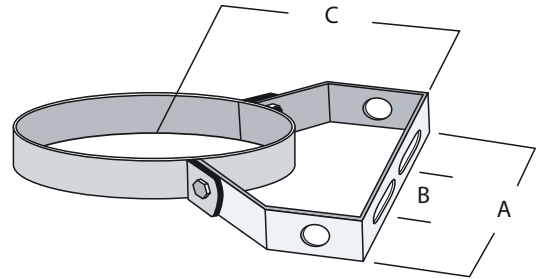


DIA	A	B	C	D	E
100	312	254	125	125	156
125	331	273	137	137	181
150	357	299	150	150	206
175	382	324	162	162	231
200	434	356	177	177	256
225	453	375	190	190	281
250	478	400	204	204	306
300	529	451	230	230	356
350	580	502	255	255	406
400	631	553	280	280	456
450	682	604	305	305	506
500	752	654	331	331	556
550	803	705	356	356	606
600	854	756	382	382	656
650	905	807	407	407	706
700	956	856	432	432	756
750	994	896	450	450	806
800	1044	946	475	475	856
850	1094	996	500	500	906
900	1144	1046	525	525	956
950	1194	1096	550	550	1006
1000	1244	1146	575	575	1056

DIA	A	B	C	D	E
100	290	225	125	118	106
125	290	225	137	118	131
150	312	254	150	125	156
175	331	273	162	137	181
200	357	299	177	150	206
225	382	324	190	162	231
250	434	356	204	177	256
300	478	400	230	201	306
350	529	451	255	227	356
400	580	502	280	252	406
450	631	553	305	278	456
500	682	604	331	303	506
550	752	654	356	328	556
600	803	705	382	354	606
650	854	756	407	379	656
700	905	807	432	405	706
750	944	848	450	425	756
800	994	896	475	450	806
850	1044	946	500	475	856
900	1094	996	525	500	906
950	1144	1046	550	525	956
1000	1194	1096	575	550	1006

DIA	A	B	C
100	177	71	125
125	199	93	138
150	222	116	150
175	242	136	163
200	269	163	175
225	291	185	188
250	315	209	200
300	359	253	225
350	403	297	250
400	448	342	275
450	491	385	300
500	535	429	325
550	578	472	350
600	623	517	375
650	667	561	400
700	711	605	425
750	742	636	450
800	785	679	475
850	829	723	500
900	872	766	525
950	915	809	550
1000	959	853	575

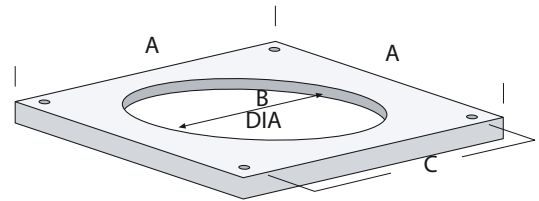
### B - TYPE WALL BRACKET



When using 458 dia and above, the back plate will include a strengthening gusset. At smaller diameters gussets may also be used if the stand-off exceeds 50mm.

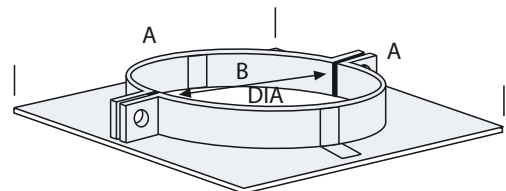
DIA	A	B	C
100	250	106	210
125	275	131	235
150	300	156	260
175	325	181	285
200	350	206	310
225	375	231	335
250	400	256	360
300	450	306	410
350	500	356	460
400	550	406	510
450	600	456	560
500	650	506	610
550	700	556	660
600	750	606	710
650	800	656	760
700	850	706	810
750	900	756	860
800	950	806	910
850	1000	856	960
900	1050	906	1010
950	1100	956	1060
1000	1150	1006	1110

### BASE PLATE ONLY

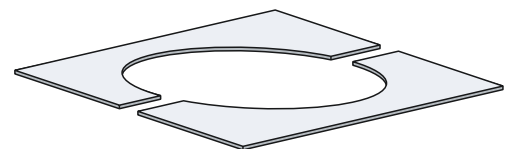


DIA	A	B
100	350	150
125	375	175
150	400	200
175	425	225
200	454	250
225	480	275
250	505	300
300	555	350
350	605	400
400	658	450
450	708	500
500	760	550
550	810	600
600	860	650
650	910	700
700	960	750
750	900	800
800	1050	850
850	1100	900
900	1150	950
950	1200	1000
1000	1230	1050

### SUPPORT PLATE AND RING



FIRESTOP SUPPORT PLATE  
1 PIECE



FIRESTOP SUPPORT PLATE  
2 PIECE 0-30 DEGREES



A1 Bridge Flue Systems are long established manufacturers of flue systems supplied throughout the U.K. A1 Flue Systems may be tailor made to suit your exact requirements.

Installations are designed in house by our own design team, operating the latest computer technology.

All flue components are manufactured in our own factory using computer controlled pattern cutting and hand assembly. This allows for efficient production of standard components & specials to be produced often without extended delivery dates.

Quality assurance to ISO9001:2000

Cert. No. 1273/97



Certificate No. 1273/97

