

ABS Jointing Procedures

ABS pipework systems are designed to have an interference fit and are not designed to be dry fitted. ABS cement is not gap filling. ABS cement softens the inside of the fitting and the outside of the pipe to form a joint chemically. Strength of joint is reduced if surfaces are not cleaned and properly prepared.

1. Cut the pipe end square.
2. Remove burrs and clean out swarf. A chamfer must be filed approx 3mm x 45° (This will prevent the layer of cement being scraped away as the pipe is pushed into the fitting).
3. Use a felt marker pen or pencil to mark the pipe at the distance which will penetrate the socket to the root/stop.
4. Thoroughly clean the surfaces of both pipe and fittings with MEK cleaner on a clean lint-free cloth. Please note it is not necessary to abrade pipe or fitting unless pipes are discoloured/sun bleached
5. Stir the ABS Cement **SLOWLY** but thoroughly.
6. Use a clean brush approximately half as wide as the pipe to be jointed.
Apply cement to the pipe and fittings using longitudinal strokes.
The pipe should have a slightly thicker coating than the fitting.
The prepared areas should be completely covered with cement.
Note: It is important to apply cement quickly to enable assembly without excessive force being required.
7. Immediately after application of cement push pipe fully home into the fitting without rotating.
Hold the pipe and fitting for up to a minute, depending on size, to ensure fitting does not slide off the pipe.
Note: When working under cold conditions ensure the joints are free from frost and moisture and allow extra curing time.
8. Wipe off excess cement from both sides of the joint using a clean lint-free cloth.
9. Replace lids on tins.
10. Clean brush in MEK cleaner.

PRECAUTIONS

The jointing area must be well ventilated

Do not allow a naked flame or smoking in the jointing area

Ensure cement is used prior to its expiry date (shown on bottom of tin)

Wear rubber or latex gloves when applying MEK cleaner and ABS cement

Never dilute ABS solvent cement

Always replace lids on tins when not in use

Always use clean brushes

Always use clean lint-free cloth or absorbent paper

Use a shelter to keep jointing surfaces dry in wet weather

CEMENT SETTING TIMES

PIPE DIAMETER	UP TO 2"		2 1/2" TO 6"		8" AND ABOVE	
	Up to 5 bar	Up to 10 bar	Up to 5 bar	Up to 10 bar	Up to 5 bar	Up to 10 bar
>15°C	2 h	4 h	3 h	6 h	4 h	8 h
5°C to 15°C	4 h	8 h	6 h	12 h	8 h	16 h
0° to +5°C	6 h	12 h	9 h	18 h	12 h	24 h

These times are applicable to Griffon cement.

CEMENT USAGE RECOMMENDATIONS

The following is an estimation of the number of joints likely to be achieved per litre of solvent cement.

NOMINAL BORE	NUMBER OF JOINTS	TYPE AND SIZE OF BRUSH	NUMBER OF PEOPLE
3/8" - 1/2"	400	4mm Round	1
3/4" - 1"	400	8mm Round	1
1 1/4" - 2"	200	1" Flat	1
2 1/2" - 3"	60	2" Flat	1
4"	35	2" Flat	2
5" - 6"	20	3" Flat	2
8"	10	3" Flat	3

INSTALLING THREADED FITTINGS

1. Ensure all threads are clean.
2. Apply PTFE tape to the male thread for 1½ turns in a clockwise direction.
3. Screw the female threaded fitting by hand onto the male thread.
4. It should be possible to screw the fitting on by hand for ⅔ of the thread length.
5. After tightening by hand add an extra ½ turn with a suitable tool ie strap wrench

PRECAUTIONS

Use PTFE tape only. Do not use thread seal paste or any other jointing compound. Do not force tightening of the joint under any circumstances. For connecting plastic pipework systems to metal pipework systems composite unions and/or flanges must be used.

ABS JOINTING PROCEDURES



NOTE 2



NOTE 3



NOTE 4



NOTE 4



NOTE 6



NOTE 6



NOTE 7



NOTE 8



NOTE 8

ABS PRESSURE PIPES

MANUFACTURING STANDARDS

ABS products are generally manufactured in accordance with the following standards:

- Primeline Pipe - BS5391 Part 1
- Fittings - BS5392 Part 1
- Threaded Fittings - BS21, DIN2999, ISO7

Unless otherwise stated ABS Pressure Fittings have the following pressure ratings:

Solvent Weld - 1/2" to 8" = Class E/15 bar

Threaded = Class D/12 bar

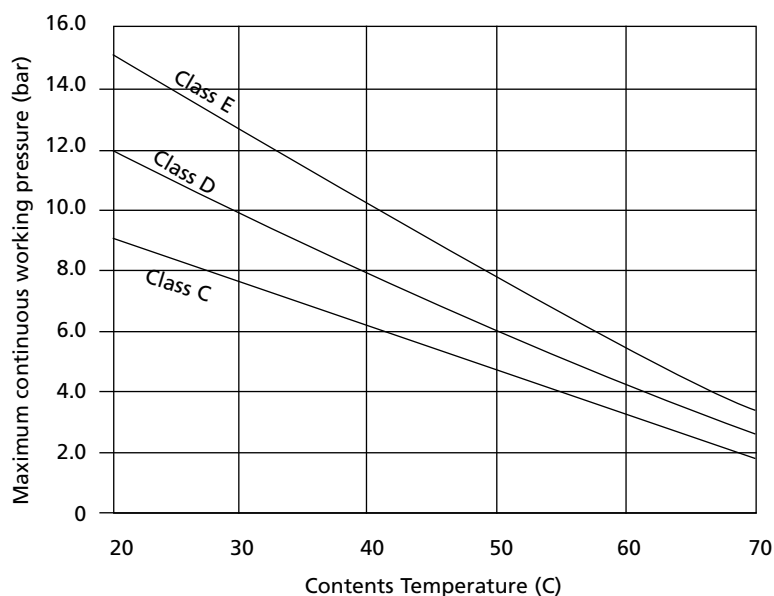
* All quoted at 20°C

ABS SYSTEM PRESSURE/TEMPERATURE RELATIONSHIP

Pressure ratings for plastic pipework systems are always quoted at 20°C, it is a fundamental principle of such systems that if the temperature is increased then the pressure rating must be reduced.

ABS systems should never be used for temperatures in excess of 70°C.

The following chart gives a rough guide as to the pressure/temperature relationship of ABS pipework systems.



In above ground installations it is essential to provide support to ensure that the weight of the pipe and its contents are adequately supported. The following recommended maximum spacings are for ABS pipes operating under the following conditions:

1. Fluid density of not more than 1g/cm³
2. PN15 pipe
3. Horizontal pipe runs

ABS PIPEWORK SUPPORT CENTRES

NOMINAL BORE	20°C 50°C 70°C		
	SPACING GIVEN IN METRES		
3/8"	0.8	0.5	0.4
1/2"	0.9	0.6	0.5
3/4"	1.0	0.7	0.6
1"	1.1	0.8	0.7
1 1/4"	1.2	0.9	0.7
1 1/2"	1.3	1.0	0.7
2"	1.4	1.1	0.8
2 1/2"	1.5	1.2	0.8
3"	1.6	1.2	0.9
4"	1.8	1.3	1.0
5"	2.0	1.5	1.1
6"	2.1	1.6	1.2
8"	2.3	1.8	1.5

FOR VERTICAL PIPE RUNS SPACING SHOULD BE INCREASED BY 50%.

DIMENSIONS IN MM

NOMINAL BORE	MEAN O.D.
1/2"	21.4
3/4"	26.7
1"	33.6
1 1/4"	42.2
1 1/2"	48.3
2"	60.3
2 1/2"	75.2
3"	88.9
4"	114.3
5"	140.2
6"	168.3
8"	219.1

ABS PRESSURE PIPES

PRIMELINE ABS PRESSURE PIPE TO BS5391 PART 1

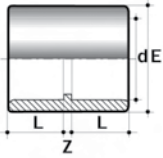


SIZE		CLASS	PIPE OD mm	WALL mm	PIPE ID mm	Wt (Kg/m)
1/2"	ABS/ETUBE-3-12	E	21.4	2.0	17.4	0.13
3/4"	ABS/ETUBE-3-34	E	26.7	2.5	21.7	0.20
1"	ABS/CTUBE-3-1	C	33.6	2.0	29.6	0.21
	ABS/ETUBE-3-1	E	33.6	3.1	27.4	0.31
1 1/4"	ABS/CTUBE-3-114	C	42.2	2.5	37.2	0.32
	ABS/ETUBE-3-114	E	42.2	3.9	34.4	0.49
1 1/2"	ABS/CTUBE-3-112	C	48.3	2.8	42.7	0.42
	ABS/ETUBE-3-112	E	48.3	4.5	39.3	0.64
2"	ABS/CTUBE-3-2	C	60.3	3.6	53.1	0.67
	ABS/ETUBE-3-2	E	60.3	5.6	49.1	1.00
2 1/2"	ABS/CTUBE-3-212	C	75.2	5.0	65.2	1.14
3"	ABS/CTUBE-3-3	C	88.9	5.2	78.5	1.40
	ABS/ETUBE-3-3	E	88.9	8.3	72.3	2.16
4"	ABS/CTUBE-3-4	C	114.3	6.6	101.1	2.32
	ABS/ETUBE-3-4	E	114.3	10.6	93.1	3.59

PIPE IS SUPPLIED PLAIN ENDED
 STANDARD PIPE LENGTH SUPPLIED IS 6 METRES OR 5.8 METRES
 ALL WALL THICKNESSES AND PIPE ID'S ARE APPROXIMATE VALUES.

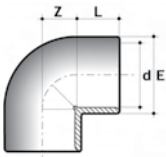
ABS PRESSURE FITTINGS PLAIN

SOCKET SO13



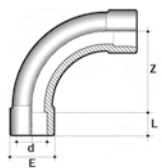
d		L	Z	E	Wt (g)					
1/2"	SO13-12-ABS	16	3	28	10					
3/4"	SO13-34-ABS	19	3	34	16					
1"	SO13-1-ABS	22	3	42	25					
1 1/4"	SO13-114-ABS	26	3	51	42					
1 1/2"	SO13-112-ABS	31	3	61	67					
2"	SO13-2-ABS	38	3	75	126					
2 1/2"	SO13-212-ABS	44	4	88	167					
3"	SO13-3-ABS	51	5	106	279					
4"	SO13-4-ABS	61	6	129	466					

90° ELBOW EL53



d		L	Z	E	Wt (g)					
1/2"	EL53-12-ABS	16	11	26.5	11					
3/4"	EL53-34-ABS	19	14	32.5	18					
1"	EL53-1-ABS	22	17	41	32					
1 1/4"	EL53-114-ABS	26	23	50	54					
1 1/2"	EL53-112-ABS	31	28	60	112					
2"	EL53-2-ABS	38	34	75	214					
2 1/2"	EL53-212-ABS	44	40	89	285					
3"	EL53-3-ABS	51	48	106	492					
4"	EL53-4-ABS	61	58	129	812					
5"	EL53-5-ABS	76	72	168	1500					
6"	EL53-6-ABS	86	81	188	3000					

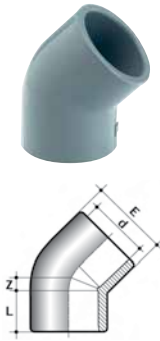
90° SHORT RADIUS BEND BE33



d		L	Z	E	Wt (g)					
1/2"	BE33-12-ABS	16	40	28	30					
3/4"	BE33-34-ABS	19	50	35	45					
1"	BE33-1-ABS	22	64	42	90					
1 1/4"	BE33-114-ABS	26	80	51	138					
1 1/2"	BE33-112-ABS	31	100	63	245					
2"	BE33-2-ABS	38	126	77	410					
2 1/2"	BE33-212-ABS	44	150	94	780					
3"	BE33-3-ABS	51	180	113	1220					
4"	BE33-4-ABS	61	220	132	2030					

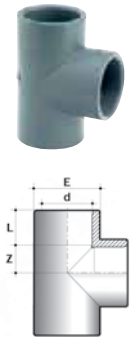
ABS PRESSURE FITTINGS PLAIN

45° ELBOW EY53



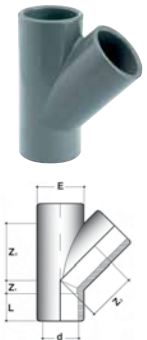
d		L	Z	E	Wt (g)					
1/2"	EY53-12-ABS	16	5.5	28	11					
3/4"	EY53-34-ABS	19	6	34	19					
1"	EY53-1-ABS	22	8	42	31					
1 1/4"	EY53-114-ABS	26	10	51	44					
1 1/2"	EY53-112-ABS	31	12	61	94					
2"	EY53-2-ABS	38	15	75	161					
2 1/2"	EY53-212-ABS	44	18	88	233					
3"	EY53-3-ABS	51	21	106	376					
4"	EY53-4-ABS	61	25	130	690					
6"	EY53-6-ABS	86	36	197	1616					

EQUAL TEE TE43



d		L	Z	E	Wt (g)					
1/2"	TE43-12-ABS	16	11	27.5	16					
3/4"	TE43-34-ABS	19	14	33.5	26					
1"	TE43-1-ABS	22	17	42	47					
1 1/4"	TE43-114-ABS	26	21	51	76					
1 1/2"	TE43-112-ABS	31	26	61	153					
2"	TE43-2-ABS	38	33	75	274					
2 1/2"	TE43-212-ABS	44	39	89	373					
3"	TE43-3-ABS	51	47	106	630					
4"	TE43-4-ABS	61	57	129	1083					
5"	TE43-5-ABS	76	71	162.5	1917					
6"	TE43-6-ABS	86	81	188	3720					

Y PIECE/45° TEE TY43



d		L	Z ₁	Z ₂	E	Wt (g)				
1/2"	TY43-12-ABS	16	7	29	27.5	28				
3/4"	TY43-34-ABS	19	7	36	33.5	38				
1"	TY43-1-ABS	22	8	44	42	71				
1 1/4"	TY43-114-ABS	26	10	54	50.5	115				
1 1/2"	TY43-112-ABS	31	12	65	61	230				
2"	TY43-2-ABS	38	14	80	74.5	397				

UNION UN83

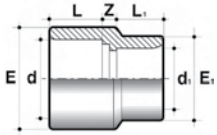


d		L	Z ₁	Z ₂	G ₁	E	Wt (g)			
1/2"	UN83-12-ABS	16	3	10	1"	42	42			
3/4"	UN83-34-ABS	19	3	10	1 1/4"	52	70			
1"	UN83-1-ABS	22	3	10	1 1/2"	59	97			
1 1/4"	UN83-114-ABS	26	3	12	2"	72	155			
1 1/2"	UN83-112-ABS	31	3	14	2 1/4"	79	216			
2"	UN83-2-ABS	38	3	18	2 3/4"	96	340			
2 1/2"*	UN83-212-ABS	44	3	18	3 1/2"	119	580			
3"*	UN83-3-ABS	51	5	18	4"	134	760			
4"*	UN83-4-ABS	61	5	18	5"	163	1280			

* PN10 RATED

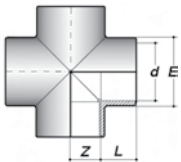
ABS PRESSURE FITTINGS PLAIN

REDUCING SOCKET RS13



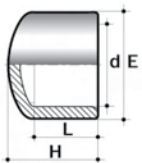
d x d ₁		L	L ₁	Z	E	E ₁	Wt (g)						
3/4" x 1/2"	RS13-3412-ABS	19	16	6	34	28	25						
1" x 3/4"	RS13-134-ABS	22	19	6	42	33	35						
1 1/4" x 1"	RS13-1141-ABS	26	22	6	51	41	58						
1 1/2" x 1 1/4"	RS13-112114-ABS	31	26	6	61	50	80						
2" x 1 1/2"	RS13-2112-ABS	38	31	6	75	60.5	120						
2 1/2" x 2"	RS13-2122-ABS	44	38	6	89	75	210						
3" x 2 1/2"	RS13-3212-ABS	51	44	6	106	88	300						
4" x 3"	RS13-43-ABS	61	51	6	129	106	510						

CROSS CR33



d		L	Z	E	Wt (g)								
1/2"	CR33-12-ABS	16	11	27.5	20								
3/4"	CR33-34-ABS	19	14	33.5	32								
1"	CR33-1-ABS	22	17	42	56								
1 1/4"	CR33-112-ABS	26	21	51	88								
1 1/2"	CR33-2-ABS	31	26	61	180								

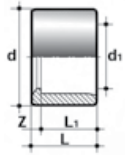
CAP CA73



d		L	H	E	Wt (g)								
1/2"	CA73-12-ABS	16	27	28	8								
3/4"	CA73-34-ABS	19	31	33	12								
1"	CA73-1-ABS	22	36	41	20								
1 1/4"	CA73-114-ABS	26	43	50	30								
1 1/2"	CA73-112-ABS	31	49	60.5	55								
2"	CA73-2-ABS	38	57	75	96								
2 1/2"	CA73-212-ABS	44	67	89	133								
3"	CA73-3-ABS	51	80	106	228								
4"	CA73-4-ABS	61	95	129	390								

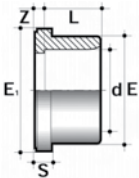
ABS PRESSURE FITTINGS PLAIN

REDUCING BUSH RB93



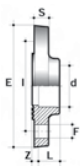
d x d ₁		L	L ₁	Z	Wt (g)				
3/4" x 1/2"	RB93-3412-ABS	19	16	3	4				
1" x 1/2"	RB93-112-ABS	22	16	6	12				
1" x 3/4"	RB93-134-ABS	22	19	3	8				
1 1/4" x 3/4"	RB93-11434-ABS	26	19	7	22				
1 1/4" x 1"	RB93-1141-ABS	26	22	4	15				
1 1/2" x 1 1/4"	RB93-112114-ABS	31	26	5	17				
2" x 1 1/2"	RB93-2112-ABS	38	31	7	41				
2 1/2" x 2"	RB93-2122-ABS	44	38	6	72				
3" x 2 1/2"	RB93-3212-ABS	51	44	7	116				
4" x 3"	RB93-43-ABS	61	51	10	246				

STUB FLANGE ST23



d		L	Z	S	E	E ₁	Wt (g)		
1/2"	ST23-12-ABS	16	3	6	27	34	8		
3/4"	ST23-34-ABS	19	3	7	33	41	11		
1"	ST23-1-ABS	22	3	7	41	50	17		
1 1/4"	ST23-114-ABS	26	3	8	50	61	36		
1 1/2"	ST23-112-ABS	31	3	8	61	73	54		
2"	ST23-2-ABS	38	3	9	76	90	93		
2 1/2"	ST23-212-ABS	44	3	10	90	106	120		
3"	ST23-3-ABS	51	5	11	108	125	204		
4"	ST23-4-ABS	61	5	12	131	150	271		
5"	ST23-5-ABS	76	5	14	165	188	564		
6"	ST23-6-ABS	88	7	14	193	217	821		

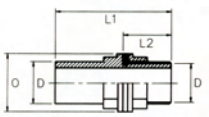
FULL FACE FLANGE FF30 – BS10 TABLES D & E



d		L	Z	I	E	HOLES	Bolt Dia	Wt (g)		
1/2"	FF30-12-ABS	16	4.5	67	95	4	M12	70		
3/4"	FF30-34-ABS	19	4.5	73	105	4	M12	105		
1"	FF30-1-ABS	22	4.5	83	115	4	M12	145		
1 1/4"	FF30-114-ABS	26	4.5	88	142	4	M12	176		
1 1/2"	FF30-112-ABS	31	4.5	98	152	4	M12	224		
2"	FF30-2-ABS	38	4.5	115	165	4	M16	304		
3"	FF30-3-ABS	51	7	146	200	4	M16	548		
4"	FF30-4-ABS	61	8	178	220	8	M16	752		

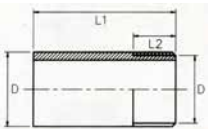
ABS PRESSURE FITTINGS PLAIN/THREADED (BSP)

TANK CONNECTOR TC93



D		L1	L2	O	Wt (g)					
1/2"•	TC93-12-ABS	77	42	38	31					
3/4"•	TC93-34-ABS	77	42	42	37					
1"•	TC93-1-ABS	103	55	55	71					
1 1/4"•	TC93-114-ABS	121	70	65	112					
1 1/2"•	TC93-112-ABS	128	73	72	168					
2"•	TC93-2-ABS	154	85	93	317					
2 1/2"•	TC93-212-ABS	164	88	106	358					
3"•	TC93-3-ABS	202	112	125	674					
4"•	TC93-4-ABS	230	130	154	1214					

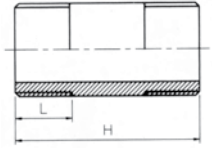
NIPPLE BN12*



D		L2	L1	Wt (g)						
1/2"•	BN12-12-ABS	17	50	14						
3/4"•	BN12-34-ABS	16	56	25						
1"•	BN12-1-ABS	20	63	38						
1 1/4"•	BN12-114-ABS	24	75	52						
1 1/2"•	BN12-112-ABS	30	88	80						
2"•	BN12-2-ABS	32	88	115						
2 1/2"•	BN12-212-ABS	35	106	197						
3"•	BN12-3-ABS	39	128	300						
4"•	BN12-4-ABS	43	153	560						

ABS PRESSURE FITTINGS THREADED (BSP)

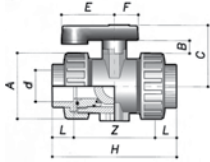
NIPPLE BN11*



SIZE		L	H	Wt (g)						
1/2"•	BN11-12-ABS	13	50	10						
3/4"•	BN11-34-ABS	14	56	15						
1"•	BN11-1-ABS	17	63	25						
1 1/4"•	BN11-114-ABS	19	75	50						
1 1/2"•	BN11-112-ABS	19	88	72						
2"•	BN11-2-ABS	23	88	109						
2 1/2"•	BN11-212-ABS	30	106	115						
3"•	BN11-3-ABS	30	128	268						
4"•	BN11-4-ABS	36	153	520						

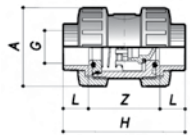
ABS MANUAL VALVES

INDUSTRIAL BALL VALVE - DOUBLE UNION - PTFE SEAT - EDPM SEALS - PLAIN ENDS



d		L	Z	H	A	B	C	E	F	PN	Wt (g)
1/2"	BVI13-12-ABS	16	62	94	50	10	48	39	19	15	135
3/4"	BVI13-34-ABS	19	74	112	60	11	54	47	22	15	212
1"	BVI13-1-ABS	22	77	121	68	13	62	55	25	15	301
1 1/4"	BVI13-114-ABS	26	87	139	80	18	75	60	30	15	436
1 1/2"	BVI13-112-ABS	31	93	155	96	20	87	68	35	15	708
2"	BVI13-2-ABS	38	113	189	116	20	101	80	40	15	1152
2 1/2"	BVI13-212-ABS	44	116	204	145	25	123	90	45	10	1840
3"	BVI13-3-ABS	51	130	232	166	28	138	100	50	10	2924
4"	BVI13-4-ABS	61	150	272	210	28	160	120	60	10	4800

STANDARD SPRING CHECK NON RETURN VALVE CVD13 - DOUBLE UNION - STAINLESS STEEL SPRING - EPDM SEALS - PLAIN ENDS



G		L	Z	H	A	CLASS	Wt (g)				
1/2"	CVD13-12-ABS	16	48	80	50	E	87				
3/4"	CVD13-34-ABS	19	53	91	60	E	135				
1"	CVD13-1-ABS	22	58	102	68	E	196				
1 1/4"	CVD13-114-ABS	26	68	120	80	E	290				
1 1/2"	CVD13-112-ABS	31	78	140	96	E	476				
2"	CVD13-2-ABS	38	93	169	116	E	777				

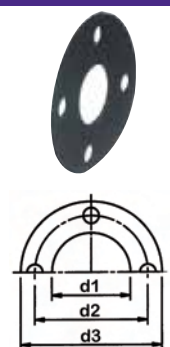
ABS ACCESSORIES

EPDM STUB GASKET SG50



SIZE		D	d							
1/2"	SG50-12-ABS	33	18							
3/4"	SG50-34-ABS	40	23							
1"	SG50-1-ABS	48	30							
1 1/4"	SG50-114-ABS	58	33							
1 1/2"	SG50-112-ABS	70	44							
2"	SG50-2-ABS	87	60							
2 1/2"	SG50-212-ABS	103	77							
3"	SG50-3-ABS	121	85							
4"	SG50-4-ABS	147	105							
5"	SG50-5-ABS	183	143							

EPDM FULL FACE GASKET SF16 – BS4504 NP10/16



SIZE		d3	d1	d2	HOLES	Wt (g)				
1/2"	SF16-12	91	22	65	4	22				
3/4"	SF16-34	101	26	75	4	31				
1"	SF16-1	116	36	85	4	34				
1 1/4"	SF16-114	140	43	100	4	48				
1 1/2"	SF16-112	150	50	110	4	51				
2"	SF16-2	165	60	125	4	66				
2 1/2"	SF16-212	185	77	145	4	80				
3"	SF16-3	200	89	160	8	86				
4"	SF16-4	220	115	180	8	95				
5"	SF16-5	250	141	210	8	108				
6"	SF16-6	286	170	240	8	136				

EPDM FULL FACE GASKET SF10 – BS10 TABLES D & E



SIZE		d3	d1	d2	HOLES	Wt (g)				
1/2"	SF10-12	91	22	67	4	22				
3/4"	SF10-34	101	26	73	4	31				
1"	SF10-1	116	36	83	4	34				
1 1/4"	SF10-114	140	43	88	4	48				
1 1/2"	SF10-112	150	50	98	4	51				
2"	SF10-2	165	60	115	4	66				
2 1/2"	SF10-212	185	77	127	4	80				
3"	SF10-3	200	89	146	4	86				
4" E	SF10-4	220	115	178	8	95				
5"	SF10-5	250	141	210	8	108				
6"	SF10-6	286	170	235	8	136				

GALVANISED MILD STEEL BACKING RING GB16 – BS4504 NP10/16



SIZE		d3	d1	d2	HOLES	Wt (g)				
1/2"	GB16-12	95	28	65	4	300				
3/4"	GB16-34	104	34	75	4	400				
1"	GB16-1	111	42	85	4	500				
1 1/4"	GB16-114	140	51	100	4	750				
1 1/2"	GB16-112	152	62	110	4	900				
2"	GB16-2	164	78	125	4	1000				
2 1/2"	GB16-212	185	92	145	4	1200				
3"	GB16-3	199	110	160	8	1300				
4"	GB16-4	218	133	180	8	1400				
5"	GB16-5	249	167	210	8	1650				
6"	GB16-6	283	196	240	8	2600				