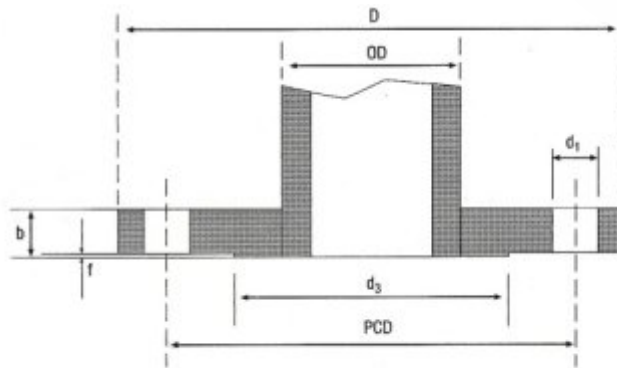




Steel Flanges
to BS 4504 Part 1:1969
SABS 1123:1977
BS 10:1962
ANSI B 16.5-1977



20 mm Nominal Bore. Pipe OD 26,9

Table	Flange	Raised face		Holes	Bolt	PCD	Mass			
		D	b					d ₁	l	No.
BS4504	6/3	90.0	14.0	50.0	2.0	4	11.0	M10	65.0	0.53
	10/3	105.0	16.0	58.0	2.0	4	14.0	M12	75.0	0.85
	16/3	105.0	16.0	58.0	2.0	4	14.0	M12	75.0	0.85
	25/3	105.0	18.0	58.0	2.0	4	14.0	M12	75.0	0.97
	40/3	105.0	18.0	58.0	2.0	4	14.0	M12	75.0	0.97
SABS1123	600/3	90.0	10.0	50.0	2.0	4	11.0	M10	65.0	0.39
	1 000/3	105.0	10.0	58.0	2.0	4	14.0	M12	75.0	0.53
	1 600/3	105.0	10.0	58.0	2.0	4	14.0	M12	75.0	0.53
	2 500/3	105.0	14.0	58.0	2.0	4	14.0	M12	75.0	0.75
	4 000/3	105.0	14.0	58.0	2.0	4	14.0	M12	75.0	0.75
BS10	T/D	101.6	4.8	-	-	4	14.2	12.7	73.0	0.76
	T/E	101.6	6.3	-	-	4	14.2	12.7	73.0	0.76
	T/F	106.6	9.5	-	-	4	14.2	12.7	73.0	0.76
ASA	150	98.4	12.7	42.9	1.6	4	15.9	M12	69.8	0.90
	300	117.5	15.9	42.9	1.6	4	19.0	M16	82.5	1.80

40 mm Nominal Bore. Pipe OD 48,3

Table	Flange	Raised face		Holes	Bolt	PCD	Mass			
		D	b					d ₁	l	No.
BS4504	6/3	130.0	16.0	80.0	3.0	4	14.0	M12	100.0	1.20
	10/3	150.0	16.0	88.0	3.0	4	18.0	M16	110.0	1.60
	16/3	150.0	16.0	88.0	3.0	4	18.0	M16	110.0	1.60
	25/3	150.0	20.0	88.0	3.0	4	18.0	M16	110.0	2.10
	40/3	150.0	20.0	88.0	3.0	4	18.0	M16	110.0	2.10
SABS1123	600/3	130.0	10.0	80.0	3.0	4	14.0	M12	100.0	0.75
	1 000/3	150.0	10.0	88.0	3.0	4	18.0	M16	110.0	1.00
	1 600/3	150.0	10.0	88.0	3.0	4	18.0	M16	110.0	1.00
	2 500/3	150.0	20.0	88.0	3.0	4	18.0	M16	110.0	2.10
	4 000/3	150.0	20.0	88.0	3.0	4	18.0	M16	110.0	2.10
BS10	T/D	133.4	6.3	-	-	4	14.2	12.7	98.4	1.16
	T/E	133.4	8.7	-	-	4	14.2	12.7	98.4	1.16
	T/F	139.7	12.7	-	-	4	17.5	15.9	104.8	1.29
ASA	150	127.0	17.5	73.0	1.6	4	15.9	M12	98.4	1.40
	300	155.6	20.6	73.0	1.6	4	19.0	M20	114.3	2.70

25 mm Nominal Bore. Pipe OD 21,3

Table	Flange	Raised face		Holes	Bolt	PCD	Mass			
		D	b					d ₁	l	No.
BS4504	6/3	100.0	14.0	60.0	2.0	4	11.0	M10	75.0	0.65
	10/3	115.0	16.0	68.0	2.0	4	14.0	M12	85.0	1.00
	16/3	115.0	16.0	68.0	2.0	4	14.0	M12	85.0	1.00
	25/3	115.0	18.0	68.0	2.0	4	14.0	M12	85.0	1.20
	40/3	115.0	18.0	68.0	2.0	4	14.0	M12	85.0	1.20
SABS1123	600/3	100.0	10.0	60.0	2.0	4	11.0	M10	75.0	0.46
	1 000/3	115.0	10.0	68.0	2.0	4	14.0	M12	85.0	0.63
	1 600/3	115.0	10.0	68.0	2.0	4	14.0	M12	85.0	0.63
	2 500/3	115.0	16.0	68.0	2.0	4	14.0	M12	85.0	1.07
	4 000/3	115.0	16.0	68.0	2.0	4	14.0	M12	85.0	1.07
BS10	T/D	114.3	4.8	-	-	4	14.3	12.7	82.6	0.97
	T/E	114.3	7.1	-	-	4	14.3	12.7	82.6	0.94
	T/F	120.6	9.5	-	-	4	17.5	15.9	87.3	1.03
ASA	150	107.9	14.3	50.8	1.6	4	15.9	M12	79.4	0.90
	300	123.8	17.5	50.8	1.6	4	19.0	M16	88.9	1.40

50 mm Nominal Bore. Pipe OD 60,3

Table	Flange	Raised face		Holes	Bolt	PCD	Mass			
		D	b					d ₁	l	No.
BS4504	6/3	140.0	16.0	90.0	3.0	4	14.0	M12	110.0	1.30
	10/3	165.0	18.0	102.0	3.0	4	18.0	M16	125.0	2.20
	16/3	165.0	18.0	102.0	3.0	4	18.0	M16	125.0	2.20
	25/3	165.0	20.0	102.0	3.0	4	18.0	M16	125.0	2.50
	40/3	165.0	20.0	102.0	3.0	4	18.0	M16	125.0	2.50
SABS1123	600/3	140.0	10.0	90.0	3.0	4	14.0	M12	110.0	0.81
	1 000/3	165.0	10.0	102.0	3.0	4	18.0	M16	125.0	1.22
	1 600/3	165.0	12.0	102.0	3.0	4	18.0	M16	125.0	1.47
	2 500/3	165.0	20.0	102.0	3.0	4	18.0	M16	125.0	2.50
	4 000/3	165.0	20.0	102.0	3.0	4	18.0	M16	125.0	2.50
BS10	T/D	152.4	7.9	-	-	4	17.5	15.9	114.3	1.47
	T/E	152.4	9.5	-	-	4	17.5	15.9	114.3	1.47
	T/F	165.1	15.9	-	-	4	17.5	15.9	127.0	2.23
ASA	150	152.4	19.0	92.1	1.6	4	19.0	M16	120.6	2.30
	300	165.1	22.2	92.1	1.6	8	19.0	M20	127.0	4.50

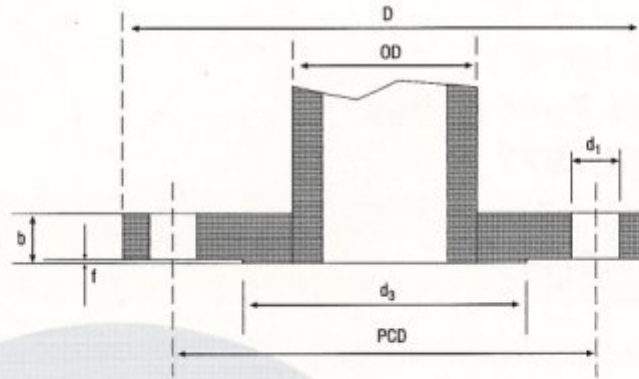
32 mm Nominal Bore. Pipe OD 21,3

Table	Flange	Raised face		Holes	Bolt	PCD	Mass			
		D	b					d ₁	l	No.
BS4504	6/3	120.0	16.0	70.0	2.0	4	14.0	M12	90.0	1.10
	10/3	140.0	16.0	78.0	2.0	4	18.0	M16	100.0	1.50
	16/3	140.0	16.0	78.0	2.0	4	18.0	M16	100.0	1.50
	25/3	140.0	18.0	78.0	2.0	4	18.0	M16	100.0	1.70
	40/3	140.0	18.0	78.0	2.0	4	18.0	M16	100.0	1.70
SABS1123	600/3	120.0	10.0	70.0	2.0	4	14.0	M12	90.0	0.69
	1 000/3	140.0	10.0	78.0	2.0	4	18.0	M16	100.0	0.94
	1 600/3	140.0	10.0	78.0	2.0	4	18.0	M16	100.0	0.94
	2 500/3	140.0	18.0	78.0	2.0	4	18.0	M16	100.0	1.70
	4 000/3	140.0	18.0	78.0	2.0	4	18.0	M16	100.0	1.70
BS10	T/D	120.7	6.3	-	-	4	14.2	12.7	87.3	0.98
	T/E	120.7	7.9	-	-	4	14.2	12.7	87.3	0.98
	T/F	133.3	12.7	-	-	4	17.5	15.9	98.4	1.21
ASA	150	117.5	15.9	63.5	1.6	4	15.9	M12	88.9	1.40
	300	133.3	19.0	63.5	1.6	4	19.0	M16	98.4	1.80

65 mm Nominal Bore. Pipe OD 48,3

Table	Flange	Raised face		Holes	Bolt	PCD	Mass			
		D	b					d ₁	l	No.
BS4504	6/3	160.0	16.0	110.0	3.0	4	14.0	M12	130.0	1.60
	10/3	185.0	18.0	122.0	3.0	4	18.0	M16	145.0	2.70
	16/3	185.0	18.0	122.0	3.0	4	18.0	M16	145.0	2.70
	25/3	185.0	22.0	122.0	3.0	8	18.0	M16	145.0	3.70
	40/3	185.0	22.0	122.0	3.0	8	18.0	M16	145.0	3.20
SABS1123	600/3	160.0	10.0	110.0	3.0	4	14.0	M12	130.0	1.00
	1 000/3	185.0	12.0	122.0	3.0	4	18.0	M16	145.0	1.80
	1 600/3	185.0	12.0	122.0	3.0	4	18.0	M16	145.0	1.80
	2 500/3	185.0	22.0	122.0	3.0	8	18.0	M16	145.0	3.20
	4 000/3	185.0	22.0	122.0	3.0	8	18.0	M16	145.0	3.20
BS10	T/D	165.1	7.9	-	-	4	17.5	15.9	127.0	1.65
	T/E	165.1	10.3	-	-	4	17.5	15.9	127.0	1.65
	T/F	184.1	15.9	-	-	8	17.5	15.9	146.0	2.68
ASA	150	177.0	22.0	104.8	1.6	4	19.0	M16	139.7	3.20
	300	190.5	25.4	104.8	1.6	8	22.2	M20	149.2	4.50

Steel Flanges to BS 4504 Part 1:1969 SABS 1123:1977 BS 10:1962 ANSI B 16.5-1977



80 mm Nominal Bore. Pipe OD 88,9

Table	Flange	Raised face		Holes	Bolt	PCD	Mass			
		D	b					d ₃	l	No.
BS4504	6/3	190.0	18.0	128.0	3.0	4	18.0	M16	150.0	2.60
	10/3	200.0	20.0	138.0	3.0	8	18.0	M16	160.0	3.30
	16/3	200.0	20.0	138.0	3.0	8	18.0	M16	160.0	3.30
	25/3	200.0	24.0	138.0	3.0	8	18.0	M16	160.0	4.00
	40/3	200.0	24.0	138.0	3.0	8	18.0	M16	160.0	4.00
SABS1123	600/3	190.0	10.0	128.0	3.0	4	18.0	M16	150.0	1.44
	1 000/3	200.0	12.0	138.0	3.0	8	18.0	M16	160.0	1.98
	1 600/3	200.0	14.0	138.0	3.0	8	18.0	M16	160.0	2.31
	2 500/3	200.0	22.0	138.0	3.0	8	18.0	M16	160.0	3.67
	4 000/3	200.0	22.0	138.0	3.0	8	18.0	M16	160.0	3.67
BS10	T/D	184.1	9.5	-	-	4	17.5	15.9	146.0	1.96
	T/E	184.1	11.1	-	-	4	17.5	15.9	146.0	1.96
	T/F	203.2	15.9	-	-	8	17.5	15.9	165.1	3.17
ASA	150	190.5	23.8	127.0	1.6	4	19.0	M16	152.4	3.60
	300	209.5	28.6	127.0	1.6	8	22.2	M20	168.3	5.90

150 mm Nominal Bore. Pipe OD 168,3 OR 165,1 (to be specified)

Table	Flange	Raised face		Holes	Bolt	PCD	Mass			
		D	b					d ₃	l	No.
BS4504	6/3	265.0	24.0	202.0	3.0	8	18.0	M16	225.0	4.40
	10/3	285.0	22.0	212.0	3.0	8	22.0	M20	240.0	6.00
	16/3	285.0	22.0	212.0	3.0	8	22.0	M20	240.0	6.00
	25/3	300.0	30.0	218.0	3.0	8	26.0	M24	250.0	9.70
	40/3	300.0	30.0	218.0	3.0	8	26.0	M24	250.0	9.70
SABS1123	600/3	265.0	12.0	202.0	3.0	8	18.0	M16	225.0	2.64
	1 000/3	285.0	16.0	212.0	3.0	8	22.0	M20	240.0	4.36
	1 600/3	285.0	18.0	212.0	3.0	8	22.0	M20	240.0	4.90
	2 500/3	300.0	30.0	218.0	3.0	8	26.0	M24	250.0	9.70
	4 000/3	300.0	30.0	218.0	3.0	8	26.0	M24	250.0	9.70
BS10	T/D	279.4	12.7	-	-	8	17.5	15.9	235.0	3.88
	T/E	279.4	17.5	-	-	8	22.2	19.0	235.0	5.36
	T/F	304.8	22.0	-	-	12	22.2	19.0	260.4	8.71
ASA	150	279.4	25.4	215.9	1.6	8	22.2	M20	241.3	8.60
	300	317.5	36.5	215.9	1.6	12	22.2	M20	269.9	17.70

100 mm Nominal Bore. Pipe OD 114,3

Table	Flange	Raised face		Holes	Bolt	PCD	Mass			
		D	b					d ₃	l	No.
BS4504	6/3	210.0	18.0	148.0	3.0	4	18.0	M16	170.0	2.90
	10/3	220.0	20.0	158.0	3.0	8	18.0	M16	180.0	3.60
	16/3	220.0	20.0	158.0	3.0	8	18.0	M16	180.0	3.60
	25/3	235.0	26.0	162.0	3.0	8	22.0	M20	190.0	5.70
	40/3	235.0	26.0	162.0	3.0	8	22.0	M20	190.0	5.70
SABS1123	600/3	210.0	10.0	148.0	3.0	4	18.0	M16	170.0	1.61
	1 000/3	220.0	12.0	158.0	3.0	8	18.0	M16	180.0	2.16
	1 600/3	220.0	14.0	158.0	3.0	8	18.0	M16	180.0	2.52
	2 500/3	235.0	25.0	162.0	3.0	8	22.0	M20	190.0	5.48
	4 000/3	235.0	25.0	162.0	3.0	8	22.0	M20	190.0	5.48
BS10	T/D	215.9	9.5	-	-	4	17.5	15.9	177.8	2.25
	T/E	215.9	13.7	-	-	8	17.5	15.9	177.8	2.25
	T/F	228.6	19.0	-	-	8	17.5	15.9	190.5	4.46
ASA	150	228.6	23.8	157.2	1.6	8	19.0	M16	190.5	5.90
	300	254.0	31.7	157.2	1.6	8	22.2	M20	200.0	10.00

200 mm Nominal Bore. Pipe OD 219,1

Table	Flange	Raised face		Holes	Bolt	PCD	Mass			
		D	b					d ₃	l	No.
BS4504	6/3	320.0	22.0	258.0	3.0	8	18.0	M16	280.0	6.40
	10/3	340.0	24.0	268.0	3.0	8	22.0	M20	295.0	8.70
	16/3	340.0	24.0	268.0	3.0	12	22.0	M20	295.0	8.40
	25/3	360.0	28.0	278.0	3.0	12	26.0	M24	310.0	12.00
	40/3	375.0	34.0	285.0	3.0	12	30.0	M27	320.0	16.00
SABS1123	600/3	320.0	14.0	258.0	3.0	4	18.0	M16	280.0	6.21
	1 000/3	340.0	18.0	268.0	3.0	8	22.0	M20	295.0	6.53
	1 600/3	340.0	22.0	268.0	3.0	12	22.0	M20	295.0	7.70
	2 500/3	360.0	28.0	278.0	3.0	12	26.0	M24	310.0	12.00
	4 000/3	375.0	32.0	285.0	3.0	12	26.0	M24	320.0	15.60
BS10	T/D	336.6	12.7	-	-	8	17.5	15.9	292.1	4.91
	T/E	336.6	19.0	-	-	8	22.2	19.0	292.1	7.59
	T/F	368.3	25.4	-	-	12	22.2	19.0	323.9	13.39
ASA	150	342.9	28.6	269.9	1.6	8	22.0	M20	298.4	13.60
	300	381.0	41.3	269.9	1.6	12	25.4	M24	330.2	26.30

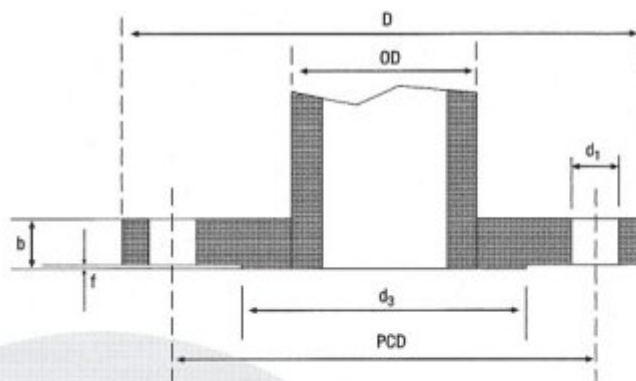
125 mm Nominal Bore. Pipe OD 139,7

Table	Flange	Raised face		Holes	Bolt	PCD	Mass			
		D	b					d ₃	l	No.
BS4504	6/3	240.0	20.0	178.0	3.0	8	18.0	M16	200.0	3.90
	10/3	250.0	22.0	188.0	3.0	8	18.0	M16	210.0	5.00
	16/3	250.0	22.0	188.0	3.0	8	18.0	M16	210.0	5.00
	24/3	270.0	28.0	188.0	3.0	8	26.0	M24	220.0	7.70
	40/3	270.0	28.0	188.0	3.0	8	26.0	M24	220.0	7.70
SABS1123	600/3	240.0	12.0	178.0	3.0	8	18.0	M16	200.0	2.34
	1 000/3	250.0	14.0	188.0	3.0	8	18.0	M16	210.0	3.18
	1 600/3	250.0	16.0	188.0	3.0	8	18.0	M16	210.0	3.64
	2 500/3	270.0	28.0	188.0	3.0	8	26.0	M24	220.0	7.70
	4 000/3	270.0	28.0	188.0	3.0	8	26.0	M24	220.0	7.70
BS10	T/D	254.6	12.7	-	-	8	17.5	15.9	209.6	3.48
	T/E	254.0	14.3	-	-	8	17.5	15.9	209.6	3.84
	T/F	279.4	22.2	-	-	8	22.2	19.0	234.9	7.81
ASA	150	254.0	23.8	185.7	1.6	8	22.2	M20	215.9	6.80
	300	279.4	34.9	185.7	1.6	8	22.2	M20	234.9	12.70

250 mm Nominal Bore. Pipe OD 273

Table	Flange	Raised face		Holes	Bolt	PCD	Mass			
		D	b					d ₃	l	No.
BS4504	6/3	375.0	24.0	312.0	3.0	12	18.0	M16	335.0	8.50
	10/3	395.0	26.0	320.0	3.0	12	22.0	M20	350.0	11.00
	16/3	405.0	26.0	320.0	3.0	12	26.0	M24	355.0	12.00
	25/3	425.0	32.0	335.0	3.0	12	30.0	M27	370.0	17.50
	40/3	450.0	42.0	345.0	3.0	12	33.0	M30	385.0	28.50
SABS1123	600/3	375.0	16.0	312.0	3.0	12	18.0	M16	335.0	5.67
	1 000/3	395.0	20.0	320.0	3.0	12	22.0	M20	350.0	8.46
	1 600/3	405.0	25.0	320.0	3.0	12	26.0	M24	355.0	11.54
	2 500/3	425.0	30.0	335.0	3.0	12	26.0	M24	370.0	16.41
	4 000/3	450.0	38.0	345.0	3.0	12	33.0	M30	385.0	25.79
BS10	T/D	406.4	15.9	-	-	8	22.2	19.0	355.6	8.70
	T/E	406.4	22.0	-	-	12	22.2	19.0	355.6	12.05
	T/F	431.0	28.6	-	-	12	25.4	22.2	381.0	19.20
ASA	150	406.4	30.2	323.8	1.6	12	25.4	M24	361.9	19.50
	300	444.5	47.6	323.8	1.6	16	28.6	M24	387.3	36.70

Steel Flanges to BS 4504 Part 1:1969 SABS 1123:1977 BS 10:1962 ANSI B 16.5-1977



300 mm Nominal Bore. Pipe OD 323,9

Table	Flange	Raised face		Holes		Bolt size	PCD	Mass kg		
		D	b	d ₃	l				No.	d ₁
BS4504	6/3	440.0	24.0	365.0	4.0	12	22.0	M20	395.0	11.00
	10/3	445.0	26.0	370.0	4.0	12	22.0	M20	400.0	12.50
	16/3	460.0	28.0	378.0	4.0	12	26.0	M24	410.0	15.50
	25/3	485.0	38.0	395.0	4.0	16	30.0	M27	430.0	25.50
	40/3	515.0	50.0	410.0	4.0	16	33.0	M30	450.0	42.00
SABS1123	600/3	440.0	20.0	365.0	4.0	12	22.0	M20	395.0	9.17
	1 000/3	445.0	22.0	370.0	4.0	12	22.0	M20	400.0	10.58
	1 600/3	460.0	28.0	378.0	4.0	12	26.0	M24	410.0	15.50
	2 500/3	485.0	32.0	395.0	4.0	16	26.0	M24	430.0	21.47
	4 000/3	515.0	40.0	410.0	4.0	16	33.0	M30	450.0	33.60
BS10	T/D	457.2	19.0	-	-	12	22.2	19.0	406.4	12.05
	T/E	457.2	25.4	-	-	12	25.4	22.2	406.4	16.07
	T/F	489.0	31.8	-	-	16	25.4	22.2	438.2	25.45
ASA	150	482.6	31.7	381.0	1.6	12	25.4	M24	431.8	29.00
	300	520.7	50.8	381.0	1.6	16	31.7	M30	450.8	52.20

450 mm Nominal Bore. Pipe OD 457,2

Table	Flange	Raised face		Holes		Bolt size	PCD	Mass kg		
		D	b	d ₃	l				No.	d ₁
BS4504	6/3	595.0	30.0	520.0	4.0	16	22.0	M20	550.0	23.70
	10/3	615.0	36.0	532.0	4.0	20	26.0	M24	565.0	33.10
	16/3	640.0	40.0	550.0	4.0	20	30.0	M27	585.0	41.20
	25/3	670.0	52.0	555.0	4.0	20	36.0	M33	600.0	67.50
	40/3	685.0	68.0	560.0	4.0	20	39.0	M36	610.0	117.50
SABS1123	600/3	595.0	25.0	520.0	4.0	16	22.0	M20	550.0	18.70
	1 000/3	615.0	30.0	532.0	4.0	20	26.0	M24	565.0	25.90
	1 600/3	640.0	40.0	550.0	4.0	20	26.0	M24	585.0	40.10
	2 500/3	670.0	45.0	555.0	4.0	20	33.0	M30	600.0	58.70
	4 000/3	685.0	60.0	575.0	4.0	20	39.0	M36	610.0	91.80
BS10	T/D	641.4	25.4	-	-	12	25.4	22.2	584.2	30.80
	T/E	641.4	34.9	-	-	16	25.4	22.2	584.2	42.86
	T/F	673.1	44.5	-	-	20	31.8	28.6	609.6	64.73
ASA	150	635.0	39.7	533.4	1.6	16	31.7	M30	577.8	59.00
	300	711.2	60.3	533.4	1.6	24	34.9	M30	628.6	113.00

350 mm Nominal Bore. Pipe OD 355 - 6

Table	Flange	Raised face		Holes		Bolt size	PCD	Mass kg		
		D	b	d ₃	l				No.	d ₁
BS4504	6/3	490.0	26.9	415.0	4.0	12	22.0	M20	445.0	15.50
	10/3	505.0	28.0	430.0	4.0	16	22.0	M20	460.0	19.50
	16/3	520.0	32.0	438.0	4.0	16	26.0	M24	470.0	24.50
	25/3	555.0	42.0	450.0	4.0	16	33.0	M30	490.0	40.50
	40/3	580.0	56.0	465.0	4.0	16	36.0	M33	510.0	63.00
SABS1123	600/3	490.0	22.0	415.0	4.0	12	22.0	M20	445.0	13.12
	1 000/3	505.0	25.0	430.0	4.0	16	22.0	M20	460.0	17.41
	1 600/3	520.0	30.0	438.0	4.0	16	26.0	M24	470.0	22.97
	2 500/3	555.0	35.0	450.0	4.0	16	33.0	M30	490.0	33.75
	4 000/3	580.0	45.0	465.0	4.0	16	33.0	M30	510.0	50.62
BS10	T/D	527.1	22.0	-	-	12	25.4	22.2	469.9	18.75
	T/E	527.1	28.6	-	-	12	25.4	22.2	469.9	25.89
	T/F	552.5	34.9	-	-	16	28.6	25.4	495.3	36.16
ASA	150	533.4	34.9	412.7	1.6	12	28.6	M24	476.2	41.00
	300	584.2	54.0	412.7	1.6	20	31.7	M30	514.3	74.80

500 mm Nominal Bore. Pipe OD 508

Table	Flange	Raised face		Holes		Bolt size	PCD	Mass kg		
		D	b	d ₃	l				No.	d ₁
BS4504	6/3	645.0	30.0	570.0	4.0	20	22.0	M20	600.0	25.50
	10/3	670.0	38.0	585.0	4.0	20	26.0	M24	620.0	39.00
	16/3	715.0	44.0	610.0	4.0	20	33.0	M30	650.0	60.00
	25/3	730.0	58.0	615.0	4.0	20	36.0	M33	660.0	86.00
	40/3	755.0	72.0	615.0	4.0	20	42.0	M39	670.0	120.00
SABS1123	600/3	645.0	25.0	570.0	4.0	20	22.0	M20	600.0	21.25
	1 000/3	670.0	32.0	585.0	4.0	20	26.0	M24	620.0	32.84
	1 600/3	715.0	40.0	610.0	4.0	20	33.0	M30	650.0	54.55
	2 500/3	730.0	50.0	615.0	4.0	20	33.0	M30	660.0	74.14
	4 000/3	755.0	70.0	615.0	4.0	20	39.0	M36	670.0	116.67
BS10	T/D	704.9	28.6	-	-	16	25.4	22.2	641.4	41.07
	T/E	704.9	38.1	-	-	16	25.4	22.2	641.4	55.80
	T/F	736.6	50.8	-	-	24	31.7	28.6	673.0	87.05
ASA	150	698.5	42.9	584.2	1.6	20	31.7	M30	635.0	75.00
	300	774.7	63.5	584.2	1.6	24	34.9	M30	685.8	143.00

400 mm Nominal Bore. Pipe OD 406,04

Table	Flange	Raised face		Holes		Bolt size	PCD	Mass kg		
		D	b	d ₃	l				No.	d ₁
BS4504	6/3	540.0	28.0	465.0	4.0	16	22.0	M20	495.0	19.00
	10/3	565.0	32.0	482.0	4.0	16	26.0	M24	515.0	26.50
	16/3	580.0	36.0	490.0	4.0	16	30.0	M27	525.0	33.00
	25/3	620.0	46.0	505.0	4.0	16	36.0	M33	550.0	54.00
	40/3	660.0	64.0	535.0	4.0	16	39.0	M36	585.0	94.00
SABS1123	600/3	540.0	22.0	465.0	4.0	16	22.0	M20	495.0	14.92
	1 000/3	565.0	25.0	482.0	4.0	16	26.0	M24	515.0	20.70
	1 600/3	580.0	35.0	490.0	4.0	16	26.0	M24	525.0	32.08
	2 500/3	620.0	40.0	505.0	4.0	16	33.0	M30	550.0	46.96
	4 000/3	660.0	50.0	535.0	4.0	16	39.0	M36	585.0	73.44
BS10	T/D	577.9	22.2	-	-	12	25.4	22.2	520.7	22.32
	T/E	577.9	31.8	-	-	12	25.4	22.2	520.7	32.59
	T/F	609.6	41.4	-	-	20	28.6	25.4	552.5	51.34
ASA	150	596.9	36.5	469.9	1.6	16	28.6	M24	539.7	44.50
	300	647.7	57.1	469.9	1.6	20	34.9	M30	571.5	86.20

600 mm Nominal Bore. Pipe OD 609,6

Table	Flange	Raised face		Holes		Bolt size	PCD	Mass kg		
		D	b	d ₃	l				No.	d ₁
BS4504	6/3	755.0	32.0	670.0	5.0	20	26.0	M24	705.0	33.00
	10/3	780.0	42.0	685.0	5.0	20	30.0	M27	725.0	53.00
	16/3	840.0	52.0	725.0	5.0	20	36.0	M33	770.0	94.00
	25/3	845.0	66.0	720.0	5.0	20	39.0	M36	770.0	120.00
	40/3	-	-	-	-	-	-	-	-	-
SABS1123	600/3	755.0	30.0	670.0	5.0	20	26.0	M24	705.0	30.94
	1 000/3	780.0	38.0	685.0	5.0	20	26.0	M24	725.0	47.95
	1 600/3	840.0	50.0	725.0	5.0	20	33.0	M30	770.0	90.38
	2 500/3	845.0	60.0	720.0	5.0	20	39.0	M36	770.0	109.09
	4 000/3	-	-	-	-	-	-	-	-	-
BS10	T/D	825.5	31.8	-	-	16	28.6	25.4	755.7	60.27
	T/E	825.5	47.6	-	-	16	31.8	28.6	755.7	89.29
	T/F	850.9	57.2	-	-	24	35.0	31.8	781.1	122.76
ASA	150	812.8	47.6	692.1	1.6	20	34.9	M30	749.3	99.80
	300	914.4	69.4	692.1	1.6	24	41.3	M39	812.8	215.00

Flange Bolt Dimensions BS 4504

N.B.	Table 6		Table 10		Table 16		Table 25		Table 40	
10	4	M10x45	4	M12x50	4	M12x50	4	M12x55	4	M12x55
15	4	M10x45	4	M12x50	4	M12x50	4	M12x55	4	M12x55
20	4	M10x45	4	M12x55	4	M12x55	4	M12x55	4	M12x55
25	4	M10x50	4	M12x55	4	M12x55	4	M12x65	4	M12x65
32	4	M12x65	4	M16x65	4	M16x65	4	M16x75	4	M16x65
40	4	M12x65	4	M16x65	4	M16x65	4	M16x75	4	M16x75
50	4	M12x65	4	M16x65	4	M16x65	4	M16x75	4	M16x75
65	4	M12x65	4	M16x65	4	M16x65	8	M16x75	8	M16x75
80	4	M16x65	8	M16x75	8	M16x75	8	M16x75	8	M16x75
100	4	M16x65	8	M16x75	8	M16x75	8	M20x90	8	M20x90
125	8	M16x75	8	M16x75	8	M16x75	8	M24x90	8	M24x90
150	8	M16x75	8	M20x75	8	M20x75	8	M24x100	8	M24x100
175	-	-	-	-	8	M20x75	12	M24x90	12	*M27x100
200	8	M16x75	8	M20x90	12	M20x90	12	M24x90	12	*M27x115
250	12	M16x75	12	M20x90	12	M24x90	12	*M27x115	12	M30x140
300	12	M20x90	12	M20x90	12	M24x90	16	*M27x115	16	M30x140
350	12	M20x90	16	M20x90	16	M24x100	16	*M30x140	16	*M33x165
400	16	M20x90	16	M24x100	16	*M27x115	16	*M33x140	16	M36x180
450	16	M20x90	-	-	-	-	-	-	20	M36x180
500	20	M20x90	20	M24x115	20	M30x140	20	*M33x165	20	*M39x200
600	20	M24x100	20	*M27x125	20	*M33x150	20	*M36x180	-	-

* Non Preferred Diam

Flange Bolt Dimensions S.A.B.S. 1123

N. B.	600 kPa		1 000 kPa		1 600 kPa		2 500 kPa		4 000 kPa	
10	4	M10x40	4	M12x45	4	M12x45	4	M12x45	4	M12x45
15	4	M10x40	4	M12x45	4	M12x45	4	M12x50	4	M12x50
20	4	M10x40	4	M12x45	4	M12x45	4	M12x50	4	M12x50
25	4	M10x40	4	M12x45	4	M12x45	4	M12x55	4	M12x55
32	4	M12x45	4	M16x50	4	M16x50	4	M16x65	4	M16x65
40	4	M12x45	4	M16x50	4	M16x50	4	M16x65	4	M16x65
50	4	M12x45	4	M16x50	4	M16x50	4	M16x65	4	M16x65
65	4	M12x45	4	M16x50	4	M16x50	8	M16x70	8	M16x70
80	4	M16x50	8	M16x50	8	M16x55	8	M16x70	8	M16x70
100	4	M16x50	8	M16x50	8	M16x55	8	M20x90	8	M20x90
125	8	M16x50	8	M16x55	8	M16x65	8	M24x90	8	M24x90
150	8	M16x50	8	M20x65	8	M20x75	8	M24x100	8	M24x100
175	8	M16x55	8	M20x70	8	M20x75	12	M24x90	12	M24x100
200	8	M16x55	8	M20x75	12	M20x75	12	M24x90	12	M24x100
250	12	M16x65	12	M20x75	12	M24x90	12	M24x100	12	M30x115
300	12	M20x75	12	M20x75	12	M24x90	16	M24x100	16	M30x125
350	12	M20x75	16	M20x90	16	M24x100	16	M30x110	16	M30x130
400	16	M20x75	16	M24x90	16	M24x115	16	M30x125	16	M36x150
450	16	M20x90	20	M24x100	20	M24x125	20	M30x140	20	M36x165
500	20	M20x90	20	M24x100	20	M30x125	20	M30x140	20	M36x190
550	20	M24x90	20	M24x110	20	M30x120	20	M36x165	-	-
600	20	M24x100	20	M24x115	20	M30x150	20	M36x165	-	-