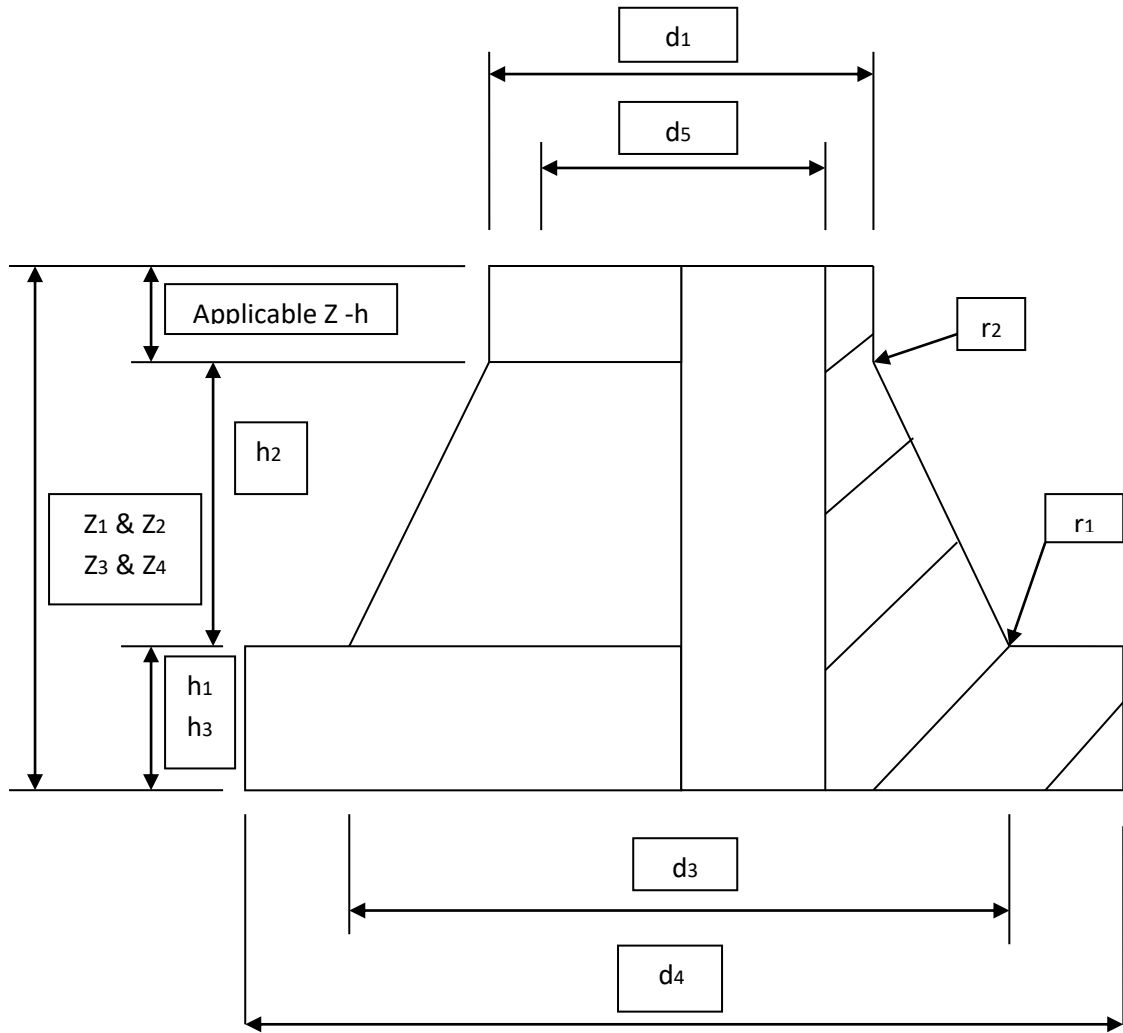


ANNEXURE I

Typical standard stub profile



Typical flange profile



PIPE mm	Z - h mm	h₁ - h₃ mm	Z₁ - Z₄ mm	r₁ - r₂ mm	d₄ mm	d₃ mm	d₆ mm	D mm
20	30	7	50	2	45	27	28	95
25*	28	9	50	2	56	33	34	105
32*	27	10	50	2	65	40	42	115
40*	24	11	50	2	73	50	51	140
50*	23	12	50	3	82	61	62	150
63*	16	14	50	3	98	71	78	165
75	14	16	50	3	110	89	92	185
90*	43	17	80	3	129	100	108	200
110	37	18	80	3	158	125	128	220
125	35	25	80	3	158	132	135	220
140	27	25	80	4	188	155	158	250
160	27	25	80	4	212	175	178	285
180	20	30	80	4	212	180	188	285
200	28	32	100	4	268	232	235	340
225	38	32	100	4	268	235	238	340
250	25	35	100	4	320	276	288	395
280	35	35	100	4	320	291	294	395
315	25	35	100	4	370	327	338	445
355	40	40	120	5	430	373	376	505
400	29	46	120	5	482	427	430	565
450*	10	60	130	5	540	473	517	670
500	10	60	120	5	585	530	533	670
560*	10	60	130	5	645	615	618	780

* NB: Stubs for 25, 32, 40, 50, 63, 90, 450 and 560 mm OD pipes the d₄ dimension has been reduced to accommodate SABS 1123 1000/3 and 1600/3, BS 10 table D and ASA 150 flanges.

Table 1: Standard stub dimensions - continued

PIPE mm	Z - h mm	h₁ - h₃ mm	Z₁ - Z₄ mm	r₁ - r₂ mm	d₄ mm	d₃ mm	d₆ mm	D mm
630	20	60	120	5	725	679	645	780
710	20	50*	120	5	800	737	740	895
800	18	52*	120	5	905	840	843	1015
900	15	55*	120	5	1005	944	947	1115
1000	10	60*	140	5	1110	1047	1050	1230
1200	10	60**	140	6	1330	1245	1260	1455

NB: * PN 10 and ** PN 6

Table 2: Standard Stubs – Dimensional Tolerances (DIN 16963-4)

PIPE OD mm	d₄ mm		d₁ mm		d₃ mm		d₅ mm		Z mm
40 – 110	+1	-0	+1	-0	+0	-1	+0	-1	+/- 1
125 – 180	+1	-0	+1.5	-0	+0	-1.5	+0	-1.5	+/- 1.5
200 – 315	+2	-0	+1.5	-0	+0	-1.5	+0	-1.5	+/- 1.5
355 – 400	+2	-0	+2	-0	+0	-2	+0	-2	+/- 2
450 - 800	+2	-1	+2	-0	+0	-2	+0	-2	+/- 2

PIPE OD	SABS 1123 1000/3				BS 10 Table D				R
	PCD	Bolt	D	Thick	PCD	Bolt	D	Thick	
20	65	M12	95	10	60.3	M12	95.5	8	3
25*	75	M12	105	10	69.8	M12	101.6	8	3
32*	85	M12	115	10	79.4	M12	114.3	8	3
40*	100	M16	140	12	88.9	M12	120.6	10	3
50*	110	M16	150	12	98.4	M12	133.3	10	3
63*	125	M16	165	12	120.6	M16	152.4	10	3
75	145	M16	185	12	139.7	M16	165.1	10	3
90*	160	M16	200	12	152.4	M16	184.1	12	3
110	180	M16	220	15	190.5	M16	215.9	15	3
125	180	M16	250	15	190.5	M16	254.0	15	3
140	210	M16	252	15	215.9	M16	254.0	15	3
160	240	M20	285	20	241.3	M16	279.4	15	3
180	240	M20	285	20	241.3	M16	285.0	15	3
200	295	M20	340	20	298.4	M16	336.6	16	3
225	295	M20	340	20	298.4	M16	369.0	16	3
250	350	M20	395	25	361.9	M20	406.4	16	3
280	350	M20	395	25	361.9	M20	406.4	20	3
315	400	M20	445	25	476.2	M20	457.2	20	3
355	460	M20	506	25	539.7	M24	527.1	23	4
400	515	M24	565	30	577.8	M24	577.9	23	4
450*	565	M24	615	30	635.0	M24	641.4	25	6
500	620	M24	670	30	749.3	M24	704.9	25	4
560*	675	M24	780	36	755.7	M24	762.0	30	7

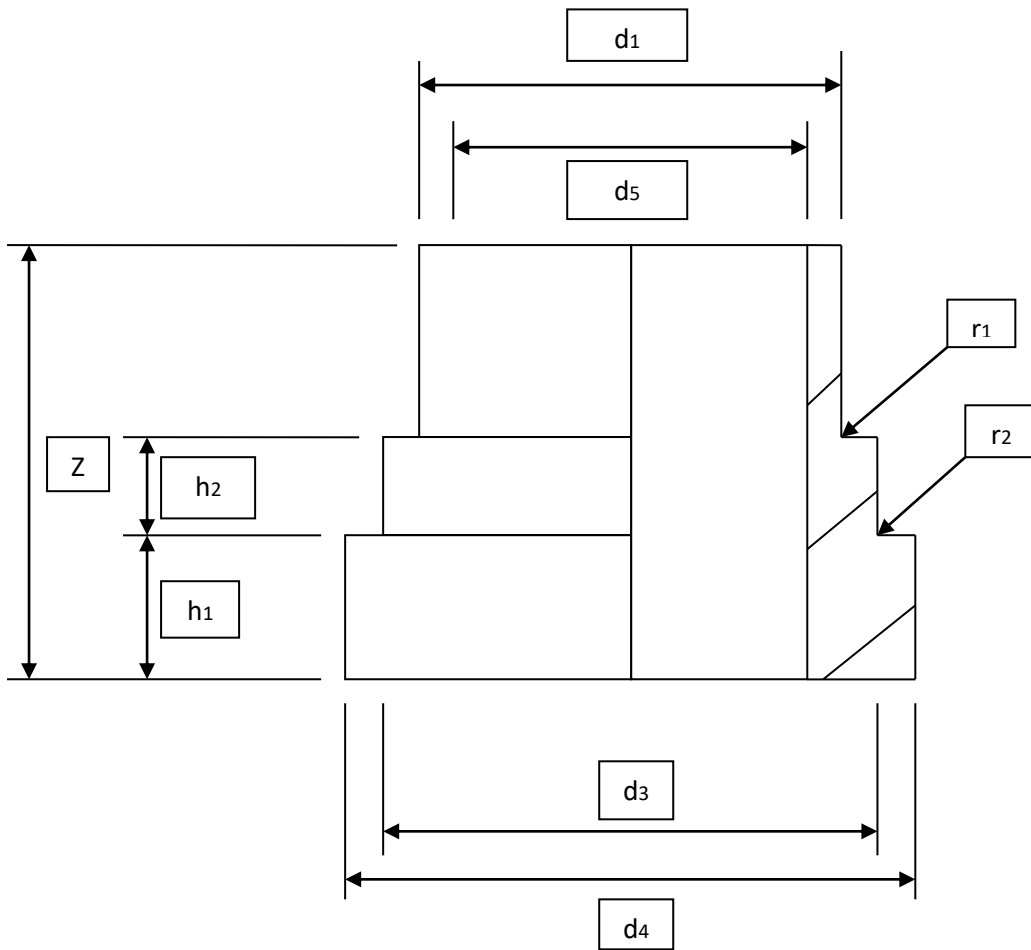
Table 3: Standard flange dimensions - continued

PIPE OD	SABS 1123 1000/3				BS 10 Table D				R
	PCD	Bolt	D	Thick	PCD	Bolt	D	Thick	
630	780	M24	780	36	755.7	M24	825.5	30	4
710	840	M24	895	40	844.6	M24	908.1	35	5
800	950	M30	1015	45	-	-	-	-	5
900	1050	M30	1115	50	1092.2	M32	1174.7	48	5
1000	1160	M30	1230	55	1174.7	M32	1257.3	51	5

Table 4: Standard flange and pipe OD

PIPE OD	Flange size	PIPE OD	Flange size	PIPE OD	Flange size	PIPE OD	Flange size
20	15	90	80	225	200	500	500
25	20	110	100	250	250	560	600
32	25	125	100	280	250	630	600
40	32	140	125	315	300	710	700
50	40	160	150	355	350	800	800
63	50	180	150	400	400	900	900
75	65	200	200	450	500	1000	1000

Typical Victaulic stub profile



PIPE mm	h₃ mm	h₁ mm	Z mm	r₁ – r₂ mm	d₄ mm	d₁ mm	d₃ Mm	d₅ mm
50	10	16	50	2	68.5	50	60	40.2
63	15	16	50	2	97	63	90	50.7
75	15	16	50	2	97	76	90	60.6
90	15	16.5	55	2	124.5	91	115	72.6
110	15	16.5	55	2	124.5	111	115	88.9
125	15	17	55	2	178.5	126	167	100.9
140	15	17	55	2	178.5	141	167	113.2
160	15	17	55	2	178.5	161	167	129.2
180	21	21	85	2	231.5	181	218	145.4
200	21	21	85	2	231.5	202	218	161.6
225	21	21	85	2	286	227	273	181.8
250	21	21	85	2	286	252	273	199.8

Table 2: Victaulic Stubs – Dimensional Tolerances

PIPE OD mm	d₄ mm	d₁ mm	d₃ mm	d₅ mm	Z mm	h₁ mm
50	+/- 0.5	+/- 0.5	+/- 0.5	+/- 0.5	+/- 1.3	+0 -0.2
90	+/- 0.5	+/- 0.5	+/- 0.5	+/- 0.5	+/- 1.0	+0 -0.5
110	+/- 0.5	+/- 0.5	+/- 0.5	+/- 0.5	+/- 1.0	+0 -0.5
160	+1.0 -0.5	+/- 0.5	+0.5 -1.0	+/- 0.5	+/- 1.0	+0.5 -0

Typical Takstub profile

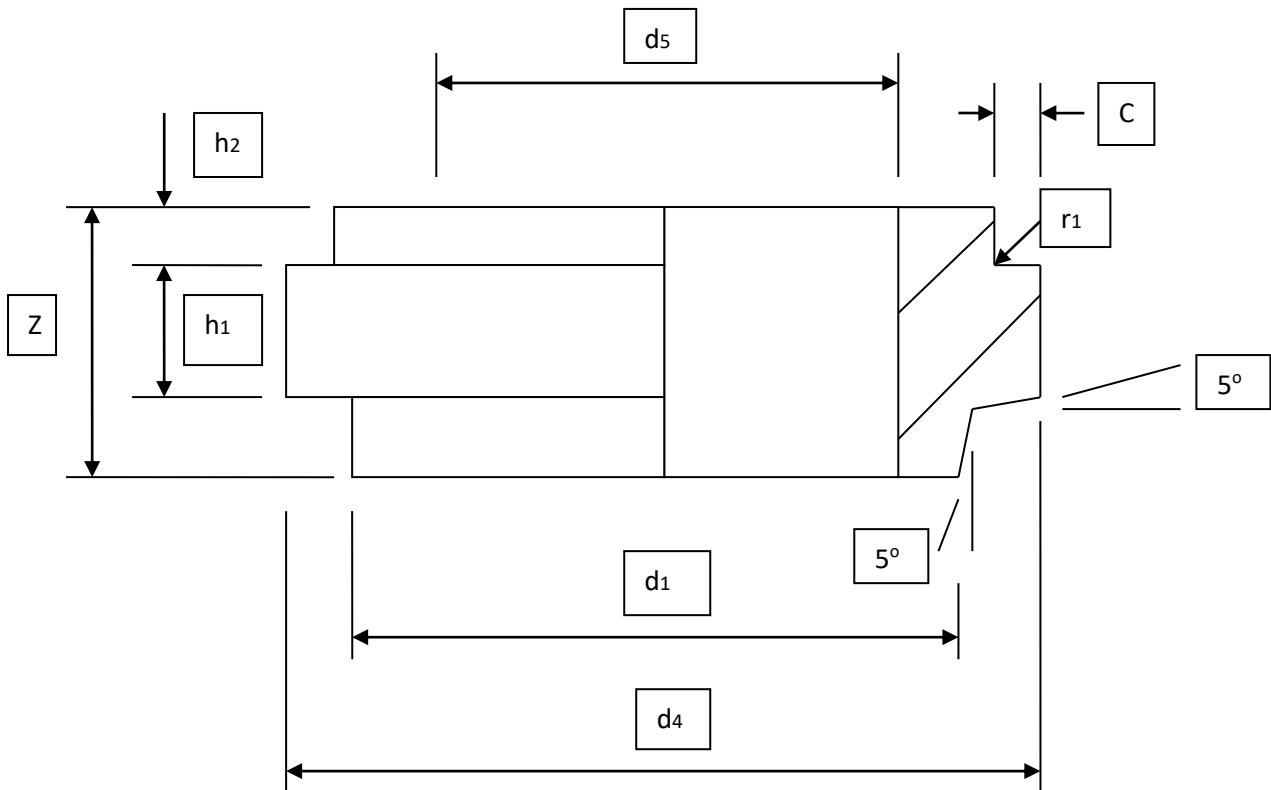


Table 1: Takstub dimensions

PIPE	h₁	h₂	C	Z	d₁	d₄
110	23	12	10	53	111	142
125	20	12	10	55	126	167
140	28	12	10	60	141	175
160	32.5	12	10	65	161	196
180	33	12	10	65	181	224
200	34.5	13	12	68	202	246
225	33	13	12	74	227	272
250	35	15	12	75	252	297
280	38	15	12	78	282	326

Table 2: Takstubs – Dimensional Tolerances

PIPE	h₁	h₂	C	Z	d₁	d₄
110	+/-0.5	+/- 0.5	+/- 0.5	+/- 1.0	+1.0 -0.2	+/-0.5
125	+/-0.5	+/- 0.5	+/- 0.5	+ 1.6 -0.0	+1.5 -0.0	+1.0 -0.5
140	+/-0.5	+/- 0.5	+/- 0.5	+ 1.6 -0.0	+1.5 -0.0	+1.0 -0.5
160	+/-0.5	+/- 0.5	+/- 0.5	+ 1.6 -0.0	+1.5 -0.0	+1.0 -0.5
180	+/-0.5	+/- 0.5	+/- 0.5	+ 1.6 -0.0	+1.5 -0.0	+1.0 -0.5
200	+/-0.5	+/- 0.5	+/- 0.5	+ 1.6 -0.0	+1.5 -0.0	+1.0 -0.5
225	+/-0.5	+/- 0.5	+/- 0.5	+ 1.6 -0.0	+1.5 -0.0	+1.0 -0.5
250	+/-0.5	+/- 0.5	+/- 0.5	+ 1.6 -0.0	+1.5 -0.0	+1.0 -0.5
280	+/-0.5	+/- 0.5	+/- 0.5	+ 1.6 -0.0	+1.5 -0.0	+1.0 -0.5