

ABS1418

Issue 3 Page 1 of 41 August 2008

Aerospace series
Tapered shank bolt,
100° countersunk head,
short thread

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1 Scope

This standard specifies the dimensions, tolerances and required characteristics of a tapered shank bolt for aerospace application.

2 Normative references

This Airbus Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this Airbus Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to apply (including amendments).

EN2424	Aerospace series - Marking of aerospace products.
EN4473	Aerospace series - Aluminium pigmented coatings – Technical specification. ¹
EN6117	Aerospace series – Specification for lubrication of bolt with cetyl alcohol. 1
EN6116	lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:
EN6118	Aerospace series – Aluminium based protection for fasteners.
AMS4928	Titanium alloy bars, wire, forgings and rings 6AI-4V annealed. ²
AMS4967	Titanium alloy bars, wire, forgings and rings 6.0AI-4.0V annealed, heat treatable. ²
AMS5662	Nickel alloy, corrosion and heat resistant, bars, forgings and rings.
AMS5962	Nickel alloy, bars and wire, corrosion and heat resistant. ²
AMS-QQ-P-416	Plating Cadmium (Electrodeposited). ²
ASNA2846	Technical specification - Material - Equivalent, for fasteners.
AS8879	Screw Threads – UNJ Profile, Inch. ²
ANSI B 46.1	Surface Roughness, Waviness, and Lay.

3 Requirements

3.1 Configuration, dimensions and tolerances

The configuration, dimensions, tolerances and mass shall be in accordance with Figure 1, Table 3 and Table 4. Oversizes dimensions shall be in accordance with Table 5 to Table 18.

- Head edge out of roundness shall not exceed "F".
- Concentricity: Conical surface of head to and taper shank at "K" to be within "X" values.
- Taper shank at "K1" and thread pitch diameter to be within "Y" values
- "H" is dimensioned from maximum "D" diameter.
- Dimensions to be met after finish and prior to application of lubricant.
- Surface texture per ANSI B46.1.
- Top of head to be flat to 0,064 mm max convex. Concave condition not allowed.
- "Z": Curved or flat edge manufacturer's option.

Mass values given in the Tables are for Titanium material, for mass values of Alloy steel and Inconel see chapter 4.

Dimensions are expressed in millimetres.

¹ Published as AECMA Standard at the date of publication of this standard

² Published by: Society of Automotive Engineers (SAE), 400 Commonwealth Drive, Warrendale, PA 15096-0001, USA

3.2 Material and finish

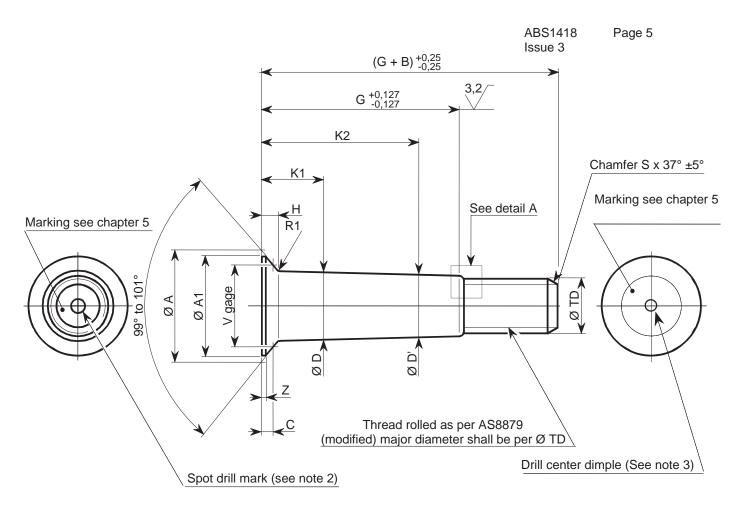
Table 1: Material and finish

Material code	Material	Finish	Lubrication	Bolt identification
٧	Titanium alloy 6AL-4V	IVD as per EN6118		Without
К	as per AMS4928 or AMS4967	Resin based aluminium coating as per specification EN4473	Cetyl alcohol as	A white color on the thread end
-	Alloy steel 8740 or 4340 as per ASNA2846 R = 1 240 MPa	Cadmium plating as per AMS-QQ-P-416, type II, class 2	per EN6117	Without
L	Inconel 718 as per AMS5962 (AMS5662 + cold working) R = 1 510 MPa	Resin based aluminium coating as per specification EN4473		A blue color on the thread end

3.3 Mechanical characteristics

Table 2: Mechanical characteristics

First	Min. t	ensile stren	gth (N)	Max	. fatigue loa	ıd (N)	Min. double shear strength (N)		
Dash No.	Alloy steel	Titanium alloy	Inconel	Alloy steel	Titanium alloy	Inconel	Alloy steel	Titanium alloy	Inconel
3	14100	12400	15820	4935	4340	5537	27250	23900	31500
4	25810	22700	28950	9034	7945	10133	47150	41330	54800
5	39560	34800	44390	13846	12180	15537	73850	64880	85100
6	59060	51950	66260	20671	18183	23191	106300	93320	123000
7	76170	67000	85460	26660	23450	29911	144550	127100	167300
8	101980	89700	108600	35693	31395	38010	188600	165760	218300
9	129150	113600	138400	45203	39760	48440	238850	209950	276400
10	163020	143400	171100	57057	50190	59885	294900	259330	341300
12	234080	205950	270920	81928	72083	94822	424350	373200	491130
14	312970	275340	362240	109540	96369	126784	573800	493990	664100
16	371180	326500	429610	129913	114275	150364	749500	625970	867450



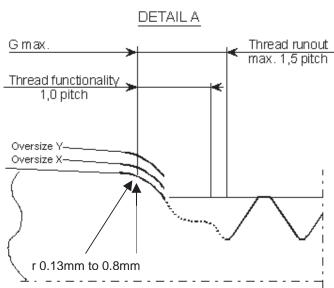


Figure 1 : Configuration

Note 1 : The maximum thread runout and thread functionality is incremented by 0,2 pitch for first oversize and 0,4 pitch for second oversize.

Note 2: spot drill mark dimensions are 0,10 mm to 0,15 mm x pin nominal diameter by 1,52 mm max. depth Note 3: For diameter codes -6 (9,52mm), -7 (11,11mm), -8 (12,7mm), -9 (14,29mm), -10 (15,88mm), -12 (19,05mm), -14 (22,23mm), and -16 (25,40) only, drill center dimple in the top of the head to a maximum diameter of 0,89 mm and a maximum depth of 0,25mm.

Dimple shall be concentric to "Ø A" within 0,20 mm.

Table 3: Dimensions and tolerances for diameter

(Continued)

Dia	Nor	Throad	Grave	O A	Ø A4	В		F	ontinue	
Dia. code	Nom. Dia.	Thread UNJF-3A	Group No.	Ø A Max.	Ø A1 Min.	(REF)		С	(see § 3.1)	H Max.
No.	Dia.	ONO! OA	140.	wax.		(11,21)	Nom.	Tolerance	(300 3 0.1)	Wax.
			1	8,74	7,54		0,84			
3	.1900	.1900-32	2	9,04	7,82	7,37	0,96	± 0,05	0,18	1,60
3	.1300	.1300-32	3	9,30	8,08	1,57	1,06	± 0,03	0,10	1,00
			-	1	-		1			
			1	11,40	10,16		0,69			
4	.2500	.2500-28	2	11,73	10,49	8,13	0,83	± 0,06	0,20	2,01
4	.2300	.2300-20	3	12,09	10,82	0,13	0,97	± 0,00	0,20	2,01
			4	12,42	11,15		1,10			
			1	13,97	12,70		0,68			
5	2425	2425 24	2	14,33	13,06	9,65	0,83	1006	0.22	2 20
5	.3125	.3125-24	3	14,68	13,41	9,00	0,98	± 0,06	0,23	2,39
			-	-	-		-			
			1	16,69	15,37		0,84			
6	2750	2750.24	2	17,07	15,75	10.67	1,00	. 0.07	0.05	2.04
6	.3750	.3750-24	3	17,45	16,13	10,67	1,16	± 0,07	0,25	2,84
			4	17,83	16,48]	1,31			
			1	19,61	17,83		1,11			
7	4075	4075 00	2	20,07	18,29	40.00	1,31		0.00	2.20
7	.4375	.4375-20	3	20,52	18,72	12,32	1,49	± 0,08	0,28	3,38
			4	20,98	19,18	1	1,68			
			1	21,95	20,12		1,42			
0	5000	5000.00	2	22,48	20,65	40.04	1,65		0.00	0.00
8	.5000	.5000-20	3	23,01	21,16	13,34	1,87	± 0,08	0,30	3,66
			4	23,55	21,67	1	2,09			
			1	24,84	22,91		0,83			
0	5005	5005.40	2	25,63	23,67	45.04	1,15		0.00	4.44
9	.5625	.5625-18	3	26,42	24,43	15,24	1,48	± 0,09	0,36	4,11
			-	-	-	1	-			
			1	27,69	25,60		0,82			
40	0050	0050.40	2	28,55	26,44	40.00	1,17	. 0.40	0.00	4.00
10	.6250	.6250-18	3	29,41	27,25	16,26	1,52	± 0,10	0,36	4,60
			-	-	-	1	-			
			1	34,49	32,00		2,47			
40	7500	7500.40	2	35,48	32,97	00.70	2,88	. 0.40	0.44	0.07
12	.7500	.7500-16	3	36,47	33,93	22,73	3,29	± 0,10	0,41	6,07
			-	-	-	1	-			
			1	40,01	37,26		2,14			
4.4	0750	0750 44	2	41,20	38,40	05.40	2,63	1044	0.44	0.00
14	.8750	.8750-14	3	42,39	39,57	25,40	3,12	± 0,11	0,41	6,93
			-	-	-	1	-			
			1	43,69	42,45		1,45			
4.0	4 0000	4 0000 : 5	2	45,01	43,78	00 :-	1,98			
16	1.0000	1.0000-12	3	46,33	45,10	29,46	2,53	± 0,12	0,41	7,11
	1		-	-	-	1	-			

Table 3 : Dimensions and tolerances for diameter (concluded)

Dia. Code No.	K1 + 1,02 0	R1 Rad + 0,25 0	S Max.	V Gage + 0.005 - 0	X (see § 3.1)	Y (see § 3.1)	Z Max. (see § 3.1)	ø ·	TD
3	2,25	0,51	0,69	6,58	0,05	0,11	0,38	4,67	4,60
4	2,73	0,51	0,79	9,59	0,05	0,11	0,38	6,20	6,12
5	3,16	0,76	0,89	12,16	0,05	0,11	0,38	7,77	7,67
6	3,59	0,76	0,89	14,47	0,08	0,15	0,38	9,35	9,25
7	4,32	1,02	1,02	16,71	0,10	0,15	0,56	10,95	10,82
8	4,55	1,02	1,02	18,28	0,10	0,15	0,56	12,52	12,40
9	5,52	1,52	1,14	22,61	0,13	0,15	0,61	14,10	13,97
10	5,52	1,52	1,14	25,47	0,13	0,15	0,66	15,70	15,54
12	7,75	1,78	1,14	28,25	0,13	0,15	0,76	18,87	18,72
14	8,14	1,78	1,27	34,54	0,15	0,20	0,86	22,05	21,87
16	7,75	1,78	1,45	39,95	0,15	0,20	0,97	25,22	25,04

Table 4: Dimensions and tolerances for length

Length	G			3		
code No.		Group No.	ØD	+ 1,01 K2 0	Ø D'	Mass (g)
1	1,59	-	-	-	-	-
2	3,18	-	-	-	-	-
3	4,76			3,30	5,06	1,03
4	6,35			4,89	5,03	1,17
5	7,94	1	5,08	6,48	4,99	1,30
6	9,53	'	3,00	8,06	4,96	1,44
7	11,11			9,65	4,93	1,58
8	12,70			11,24	4,89	1,72
9	14,29			12,83	5,13	1,93
10	15,88			14,41	5,09	2,08
11	17,46			16,00	5,06	2,22
12	19,05	2	5,35	17,59	5,03	2,37
13	20,64		5,35	19,18	4,99	2,51
14	22,23			20,76	4,96	2,65
15	23,81			22,35	4,93	2,80
16	25,40			23,94	4,89	2,95
17	26,99			25,53	5,13	3,23
18	28,58			27,11	5,09	3,38
19	30,16			28,70	5,06	3,53
20	31,75	3	5,61	30,29	5,03	3,68
21	33,34	3	5,61	31,88	4,99	3,83
22	34,93			33,46	4,96	3,99
23	36,51			35,05	4,93	4,14
24	38,10			36,64	4,89	4,29
25	39,69	-	-	-	-	-
26	41,28	-	-	-	-	-
27	42,86	-	-	-	-	-
28	44,45	-	-	-	-	-
29	46,04	-	•			-
30	47,63	-		-	-	-
31	49,21	-	•			-
32	50,80	-		-	-	-
33	52,39	-	-	-	-	-

Length	G			4			
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)	
1	1,59	-	-	-	-	1	
2	3,18	-	-	-	-	1	
3	4,76			3,30	6,65	2,04	
4	6,35			4,89	6,62	2,27	
5	7,94			6,48	6,59	2,51	
6	9,53	1	6 66	8,06	6,55	2,74	
7	11,11	ı	6,66	9,65	6,52	2,98	
8	12,70			11,24	6,49	3,21	
9	14,29			12,83	6,45	3,45	
10	15,88			14,41	6,42	3,69	
11	17,46			16,00	6,72	4,09	
12	19,05			17,59	6,69	4,34	
13	20,64				19,18	6,65	4,59
14	22,23		2 7,00	20,76	6,62	4,83	
15	23,81	2		22,35	6,59	5,08	
16	25,40		7,00	23,94	6,55	5,33	
17	26,99			25,53	6,52	5,58	
18	28,58			27,11	6,49	5,83	
19	30,16			28,70	6,45	6,08	
20	31,75			30,29	6,42	6,32	
21	33,34			31,88	6,72	6,86	
22	34,93			33,46	6,69	7,12	
23	36,51			35,05	6,65	7,38	
24	38,10			36,64	6,62	7,64	
25	39,69	3	7 22	38,23	6,59	7,90	
26	41,28	3	7,33	39,81	6,55	8,16	
27	42,86			41,40	6,52	8,42	
28	44,45			42,99	6,49	8,68	
29	46,04			44,58	6,45	8,94	
30	47,63			46,16	6,42	9,20	
31	49,21			47,75	6,72	9,95	
32	50,80	4	7,66	49,34	6,69	10,24	
33	52,39			50,93	6,65	10,51	

Table 4 : Dimensions and tolerances for length (continued)

Length	G			5		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
1	1,59	-	-	-	-	-
2	3,18	-	-	-	-	-
3	4,76			3,30	8,28	3,50
4	6,35			4,89	8,24	3,87
5	7,94			6,48	8,21	4,23
6	9,53			8,06	8,18	4,60
7	11,11	1	8,28	9,65	8,15	4,97
8	12,70			11,24	8,11	5,34
9	14,29			12,83	8,08	5,70
10	15,88			14,41	8,05	6,06
11	17,46			16,00	8,01	6,43
12	19,05			17,59	8,34	7,04
13	20,64			19,18	8,31	7,42
14	22,23			20,76	8,28	7,81
15	23,81			22,35	8,24	8,19
16	25,40			23,94	8,21	8,58
17	26,99	2	8,64	25,53	8,18	8,95
18	28,58			27,11	8,15	9,34
19	30,16			28,70	8,11	9,72
20	31,75			30,29	8,08	10,11
21	33,34			31,88	8,05	10,49
22	34,93			33,46	8,01	10,88
23	36,51			35,05	8,34	11,70
24	38,10			36,64	8,31	12,11
25	39,69			38,23	8,28	12,50
26	41,28			39,81	8,24	12,91
27	42,86			41,40	8,21	13,33
28	44,45	3	9,01	42,99	8,18	13,71
29	46,04			44,58	8,15	14,11
30	47,63			46,16	8,11	14,51
31	49,21			47,75	8,08	14,91
32	50,80			49,34	8,05	15,31
33	52,39			50,93	8,01	15,71
34	53,98	-	-	-	-	-
35	55,56	-	-	-	-	-
36	57,15	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
_	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

Length	G			6						
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)				
1	1,59	-	-	-	-	-				
2	3,18	-	-	-	-	-				
3	4,76	-	-	-	-	-				
4	6,35			4,89	9,87	5,93				
5	7,94			6,48	9,84	6,45				
6	9,53			8,06	9,80	6,98				
7	11,11			9,65	9,77	7,51				
8	12,70	1	9,90	11,24	9,74	8,04				
9	14,29			12,83	9,71	8,56				
10	15,88			14,41	9,67	9,09				
11	17,46			16,00	9,64	9,61				
12	19,05			17,59	9,61	10,14				
13	20,64			19,18	9,97	11,01				
14	22,23			20,76	9,94	11,56				
15	23,81			22,35	9,90	12,10				
16	25,40			23,94	9,87	12,66				
17	26,99			25,53	9,84	13,20				
18	28,58	2	10,29	27,11	9,80	13,75				
19	30,16		10,29	28,70	9,77	14,30				
20	31,75			30,29	9,74	14,85				
21	33,34			31,88	9,71	15,39				
22	34,93			33,46	9,67	15,95				
23	36,51			35,05	9,64	16,49				
24	38,10			36,64	9,61	17,03				
25	39,69							38,23	9,97	17,57
26	41,28			39,81	9,94	18,11				
27	42,86			41,40	9,90	18,65				
28	44,45	ļ		42,99	9,87	19,19				
29	46,04	ļ		44,58	9,84	19,73				
30	47,63	3	10,69	46,16	9,80	20,27				
31	49,21		. 0,00	47,75	9,77	20,81				
32	50,80			49,34	9,74	21,35				
33	52,39			50,93	9,71	21,89				
34	53,98			52,51	9,67	22,43				
35	55,56			54,10	9,64	22,97				
36	57,15			55,69	9,61	23,51				
37	58,74			57,28	9,97	24,05				
38	60,33			58,86	9,94	24,59				
39	61,91			60,45	9,90	25,13				
40	63,50	4	11,09	62,04	9,87	25,67				
41	65,09			63,63	9,84	26,21				
42	66,68			65,21	9,80	26,75				
43	68,26			66,80	9,77	27,29				
44	69,85			68,39	9,74	27,83				

Table 4: Dimensions and tolerances for length (continued)

Length	G		6				
code No.		Grou p No.	ØD	K2 + 1,01	Ø D'	Mass (g)	
45	71,44			69,98	9,71	28,37	
46	73,03	4	11.00	71,56	9,67	28,91	
47	74,61	4	11,09	73,15	9,64	29,45	
48	76,20			74,74	9,61	29,99	

Table 4: Dimensions and tolerances for length (continued)

Length	G			7							
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)					
5	7,94						6,48	11,50	9,49		
6	9,53			8,06	11,46	10,20					
7	11,11			9,65	11,43	10,92					
8	12,70			11,24	11,40	11,64					
9	14,29	1	11,54	12,83	11,36	12,36					
10	15,88	'	11,54	14,41	11,33	13,07					
11	17,46			16,00	11,30	13,79					
12	19,05			17,59	11,26	14,50					
13	20,64			19,18	11,23	15,22					
14	22,23			20,76	11,20	15,94					
15	23,81			22,35	11,63	17,21					
16	25,40			23,94	11,60	17,95					
17	26,99			25,53	11,56	18,70					
18	28,58			27,11	11,53	19,44					
19	30,16									28,70	11,50
20	31,75			30,29	11,46	20,94					
21	33,34	2	_	_	12.00	31,88	11,43	21,69			
22	34,93		12,00	33,46	11,40	22,43					
23	36,51			35,05	11,36	23,18					
24	38,10			36,64	11,33	23,92					
25	39,69			38,23	11,30	24,67					
26	41,28			39,81	11,26	25,41					
27	42,86			41,40	11,23	26,16					
28	44,45			42,99	11,20	26,91					
29	46,04			44,58	11,63	28,66					
30	47,63	2	2 4	2 12 47	46,16	11,60	29,44				
31	49,21	3	3 12,47	47,75	11,56	30,22					
32	50,80			49,34	11,53	30,99					

Length	G			7		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
33	52,39	3	12,47	50,93	11,50	31,77
34	53,98			52,51	11,46	32,49
35	55,56			54,10	11,43	33,33
36	57,15			55,69	11,40	34,10
37	58,74			57,28	11,36	34,88
38	60,33			58,86	11,33	35,66
39	61,91			60,45	11,30	36,44
40	63,50			62,04	11,26	37,21
41	65,09			63,63	11,23	37,99
42	66,68			65,21	11,20	38,77
43	68,26			66,80	11,63	39,55
44	69,85			68,39	11,60	40,33
45	71,44			69,98	11,56	41,11
46	73,03			71,56	11,53	41,89
47	74,61			73,15	11,50	42,67
48	76,20			74,74	11,46	43,45
49	77,79	4	12,93	76,33	11,43	44,23
50	79,38	4	12,93	77,91	11,40	45,01
51	80,96			79,50	11,36	45,79
52	82,55			81,09	11,33	46,57
53	84,14			82,68	11,30	47,35
54	85,73			84,26	11,26	48,13
55	87,31			85,85	11,23	48,91
56	88,90			87,44	11,20	49,69

Table 4 : Dimensions and tolerances for length (continued)

Length	G			8		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
5	7,94			6,48	13,15	12,92
6	9,53			8,06	13,11	13,86
7	11,11			9,65	13,08	14,80
8	12,70			11,24	13,05	15,74
9	14,29			12,83	13,01	16,67
10	15,88	1	13,19	14,41	12,98	17,61
11	17,46	'	13,13	16,00	12,95	18,54
12	19,05			17,59	12,92	19,49
13	20,64			19,18	12,88	20,41
14	22,23			20,76	12,85	21,36
15	23,81			22,35	12,82	22,29
16	25,40			23,94	12,78	23,23
17	26,99			25,53	13,28	24,98
18	28,58			27,11	13,25	25,96
19	30,16			28,70	13,21	26,93
20	31,75			30,29	13,18	27,91
21	33,34			31,88	13,15	28,88
22	34,93			33,46	13,11	29,86
23	36,51			35,05	13,08	30,83
24	38,10	2	12.72	36,64	13,05	31,82
25	39,69	2	13,72	38,23	13,01	32,78
26	41,28			39,81	12,98	33,77
27	42,86			41,40	12,95	34,74
28	44,45			42,99	12,92	35,72
29	46,04			44,58	12,88	36,69
30	47,63			46,16	12,85	37,67
31	49,21			47,75	12,82	38,64
32	50,80			49,34	12,78	39,63
33	52,39			50,93	13,28	42,07
34	53,98			52,51	13,25	43,09
35	55,56	3	14,25	54,10	13,21	44,10
36	57,15			55,69	13,18	45,13
37	58,74			57,28	13,15	46,13

						1
Length	G			8		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
38	60,33	3	14,25	58,86	13,11	47,16
39	61,91			60,45	13,08	48,17
40	63,50			62,04	13,05	49,19
41	65,09			63,63	13,01	50,20
42	66,68			65,21	12,98	51,22
43	68,26			66,80	12,95	52,23
44	69,85			68,39	12,92	53,26
45	71,44			69,98	12,88	54,26
46	73,03			71,56	12,85	55,29
47	74,61			73,15	12,82	56,30
48	76,20			74,74	12,78	57,32
49	77,79			76,33	13,28	60,70
50	79,38			77,91	13,25	61,77
51	80,96			79,50	13,21	62,84
52	82,55			81,09	13,18	63,91
53	84,14			82,68	13,15	64,98
54	85,73			84,26	13,11	66,05
55	87,31			85,85	13,08	67,12
56	88,90	4	14,78	87,44	13,05	68,19
57	90,49	4	14,70	89,03	13,01	69,26
58	92,08			90,61	12,98	70,33
59	93,66			92,20	12,95	71,40
60	95,25			93,79	12,92	72,47
61	96,84			95,38	12,88	73,54
62	98,43			96,96	12,85	74,61
63	100,01			98,55	12,82	75,68
64	101,60			100,14	12,78	76,56

Table 4 : Dimensions and tolerances for length (continued)

Length	G			9		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
6	9,53			8,06	14,98	19,70
7	11,11			9,65	14,94	20,91
8	12,70			11,24	14,91	22,12
9	14,29			12,83	14,88	23,31
10	15,88			14,41	14,84	24,52
11	17,46			16,00	14,81	25,71
12	19,05			17,59	14,78	26,92
13	20,64			19,18	14,74	28,11
14	22,23			20,76	14,71	29,32
15	23,81	1	15,03	22,35	14,68	30,52
16	25,40			23,94	14,65	31,73
17	26,99			25,53	14,61	32,92
18	28,58			27,11	14,58	34,13
19	30,16			28,70	14,55	35,32
20	31,75			30,29	14,51	36,53
21	33,34			31,88	14,48	37,72
22	34,93			33,46	14,45	38,93
23	36,51			35,05	14,41	40,13
24	38,10			36,64	14,38	41,34
25	39,69			38,23	15,14	44,46
26	41,28			39,81	15,11	45,74
27	42,86			41,40	15,07	47,00
28	44,45			42,99	15,04	48,28
29	46,04			44,58	15,01	49,54
30	47,63			46,16	14,98	50,81
31	49,21			47,75	14,94	52,08
32	50,80			49,34	14,91	53,35
33	52,39	2	15.00	50,93	14,88	54,61
34	53,98	2	15,82	52,51	14,84	55,89
35	55,56			54,10	14,81	57,15
36	57,15			55,69	14,78	58,42
37	58,74			57,28	14,74	59,68
38	60,33			58,86	14,71	60,96
39	61,91			60,45	14,68	62,22
40	63,50		-	62,04	14,65	63,50
41	65,09			63,63	14,61	64,75
42	66,68			65,21	14,58	66,03

Length	G			9		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
43	68,26	2	15,82	66,80	14,55	67,29
44	69,85			68,39	14,51	68,57
45	71,44			69,98	14,48	69,82
46	73,03			71,56	14,45	71,10
47	74,61			73,15	14,41	72,36
48	76,20			74,74	14,38	73,64
49	77,79	3	16,62	76,33	15,14	78,60
50	79,38			77,91	15,11	79,95
51	80,96			79,50	15,07	81,28
52	82,55			81,09	15,04	82,63
53	84,14			82,68	15,01	83,95
54	85,73			84,26	14,98	85,30
55	87,31			85,85	14,94	86,63
56	88,90			87,44	14,91	87,98
57	90,49			89,03	14,88	89,30
58	92,08			90,61	14,84	90,65
59	93,66			92,20	14,81	91,98
60	95,25			93,79	14,78	93,33
61	96,84			95,38	14,74	94,65
62	98,43			96,96	14,71	96,00
63	100,01			98,55	14,68	97,33
64	101,60			100,14	14,65	98,68
65	103,19			101,73	14,61	100,00
66	104,78			103,31	14,58	101,35
67	106,36			104,90	14,55	102,68
68	107,95			106,49	14,51	104,03
69	109,54			108,08	14,48	105,35
70	111,13			109,66	14,45	106,70
71	112,71			111,25	14,41	108,03
72	114,30			112,84	14,38	109,38

Table 4 : Dimensions and tolerances for length (continued)

Length	G			10		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
7	11,11			9,65	16,61	27,29
8	12,70			11,24	16,58	28,77
9	14,29			12,83	16,55	30,25
10	15,88			14,41	16,51	31,74
11	17,46			16,00	16,48	33,21
12	19,05			17,59	16,45	34,70
13	20,64			19,18	16,41	36,18
14	22,23			20,76	16,38	37,68
15	23,81			22,35	16,35	39,14
16	25,40	1	16 70	23,94	16,31	40,64
17	26,99	'	16,70	25,53	16,28	42,11
18	28,58			27,11	16,25	43,61
19	30,16			28,70	16,22	45,08
20	31,75			30,29	16,18	46,57
21	33,34			31,88	16,15	48,05
22	34,93			33,46	16,12	49,55
23	36,51			35,05	16,08	51,01
24	38,10			36,64	16,05	52,51
25	39,69			38,23	16,02	53,99
26	41,28			39,81	15,98	55,48
27	42,86			41,40	16,81	59,50
28	44,45			42,99	16,78	61,08
29	46,04			44,58	16,74	62,63
30	47,63			46,16	16,71	64,21
31	49,21			47,75	16,68	65,76
32	50,80			49,34	16,64	67,33
33	52,39			50,93	16,61	68,89
34	53,98			52,51	16,58	70,47
35	55,56			54,10	16,55	72,01
36	57,15	2	17,56	55,69	16,51	73,59
37	58,74		17,50	57,28	16,48	75,15
38	60,33			58,86	16,45	76,72
39	61,91			60,45	16,41	78,27
40	63,50			62,04	16,38	79,85
41	65,09			63,63	16,35	81,41
42	66,68			65,21	16,31	82,98
43	68,26		-	66,80	16,28	84,53
44	69,85			68,39	16,25	86,11
45	71,44			69,98	16,22	87,66
46	73,03			71,56	16,18	89,24

				40		
Length	G			10		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
47	74,61	2	17,56	73,15	16,15	90,79
48	76,20			74,74	16,12	92,37
49	77,79			76,33	16,08	93,92
50	79,38			77,91	16,05	95,50
51	80,96			79,50	16,02	97,05
52	82,55			81,09	15,98	98,58
53	84,14			82,68	16,81	104,97
54	85,73			84,26	16,78	106,63
55	87,31			85,85	16,74	108,26
56	88,90			87,44	16,71	109,93
57	90,49			89,03	16,68	111,56
58	92,08			90,61	16,64	113,23
59	93,66			92,20	16,61	114,86
60	95,25			93,79	16,58	116,52
61	96,84			95,38	16,55	118,15
62	98,43			96,96	16,51	119,81
63	100,01			98,55	16,48	121,45
64	101,60			100,14	16,45	123,11
65	103,19	3	10 10	101,73	16,41	124,74
66	104,78	3	18,42	103,31	16,38	129,43
67	106,36			104,90	16,35	128,04
68	107,95			106,49	16,31	132,72
69	109,54			108,08	16,28	131,33
70	111,13			109,66	16,25	133,00
71	112,71			111,25	16,22	134,63
72	114,30			112,84	16,18	136,29
73	115,89			114,43	16,15	137,93
74	117,48			116,01	16,12	139,59
75	119,06			117,60	16,08	141,22
76	120,65			119,19	16,05	142,88
77	122,24			120,78	16,02	144,52
78	123,83			122,36	15,98	146,18

Table 4 : Dimensions and tolerances for length (continued)

Length	G			12		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
8	12,70			11,24	19,93	33,67
9	14,29			12,83	19,90	35,15
10	15,88			14,41	19,87	36,64
11	17,46			16,00	19,83	38,11
12	19,05			17,59	19,80	39,60
13	20,64			19,18	19,77	41,08
14	22,23			20,76	19,73	42,58
15	23,81			22,35	19,70	44,04
16	25,40			23,94	19,67	45,54
17	26,99			25,53	19,63	47,01
18	28,58			27,11	19,60	48,51
19	30,16	1	20,01	28,70	19,57	49,98
20	31,75			30,29	19,54	51,47
21	33,34			31,88	19,50	52,95
22	34,93			33,46	19,47	54,45
23	36,51			35,05	19,44	55,91
24	38,10			36,64	19,40	57,41
25	39,69			38,23	19,37	58,89
26	41,28			39,81	19,34	60,38
27	42,86			41,40	19,30	64,40
28	44,45			42,99	19,27	65,98
29	46,04			44,58	19,24	67,53
30	47,63			46,16	19,20	69,11
31	49,21			47,75	20,17	70,66
32	50,80			49,34	20,13	72,23
33	52,39			50,93	20,10	73,79
34	53,98			52,51	20,07	75,37
35	55,56			54,10	20,03	76,91
36	57,15			55,69	20,00	78,49
37	58,74			57,28	19,96	80,05
38	60,33			58,86	19,93	81,62
39	61,91	1		60,45	19,90	83,17
40	63,50	1		62,04	19,87	84,75
41	65,09	2	21,00	63,63	19,83	86,31
42	66,68	1		65,21	19,80	87,88
43	68,26	1		66,80	19,77	89,43
44	69,85			68,39	19,73	91,01
45	71,44	1		69,98	19,70	92,56
46	73,03	1		71,56	19,67	94,14
47	74,61			73,15		
48	76,20			74,74	19,60	97,27
49	77,79	1		76,33	19,57	98,82
50	79,38	1		77,91	19,54	100,40
51	80,96	1		79,50	19,50	101,95

1	G			12		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
52	82,55			81,09	19,47	103,48
53	84,14			82,68	19,44	109,87
54	85,73			84,26	19,40	111,53
55	87,31			85,85	19,37	113,16
56	88,90	2	21,00	87,44	19,34	114,83
57	90,49			89,03	19,30	116,46
58	92,08			90,61	19,27	118,13
59	93,66			92,20	19,24	119,76
60	95,25			93,79	19,20	121,42
61	96,84			95,38	20,17	123,05
62	98,43			96,96	20,13	124,71
63	100,01			98,55	20,10	126,35
64	101,60			100,14	20,07	128,01
65	103,19			101,73	20,03	129,64
66	104,78			103,31	20,00	134,33
67	106,36			104,90	19,96	132,94
68	107,95			106,49	19,93	137,62
69	109,54			108,08	19,90	136,23
70	111,13			109,66	19,87	137,90
71	112,71			111,25	19,83	139,53
72	114,30			112,84	19,80	141,19
73	115,89			114,43	19,77	142,83
74	117,48			116,01	19,73	144,49
75	119,06	3	21,99	117,60	19,70	146,12
76	120,65	3	21,99	119,19	19,67	147,78
77	122,24			120,78	19,63	149,42
78	123,83			122,36	19,60	151,08
79	125,41			123,95	19,57	152,74
80	127,00			125,54	19,54	154,40
81	128,59			127,13	19,50	156,06
82	130,18			128,71	19,47	157,72
83	131,76			130,30	19,44	159,38
84	133,35			131,89	19,40	161,04
85	134,94			133,48	19,37	162,70
86	136,53			135,06	19,34	164,36
87	138,11			136,65	19,30	166,02
88	139,70			138,24	19,27	167,68
89	141,29			139,83	19,24	169,34
90	142,88			141,41	19,20	171,00

Table 4 : Dimensions and tolerances for length (continued)

Length	G			14		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
9	14,29			12,83	23,31	41,85
10	15,88			14,41	23,28	43,34
11	17,46			16,00	23,25	44,81
12	19,05			17,59	23,21	46,30
13	20,64			19,18	23,18	47,78
14	22,23			20,76	23,14	49,28
15	23,81			22,35	23,11	50,74
16	25,40			23,94	23,08	52,24
17	26,99			25,53	23,05	53,71
18	28,58			27,11	23,01	55,21
19	30,16			28,70	22,98	56,68
20	31,75			30,29	22,95	58,17
21	33,34			31,88	22,91	59,65
22	34,93	1	22 /1	33,46	22,88	61,15
23	36,51	'	23,41	35,05	22,85	62,61
24	38,10			36,64	22,81	64,11
25	39,69			38,23	22,78	65,59
26	41,28			39,81	22,75	67,08
27	42,86			41,40	22,72	71,10
28	44,45			42,99	22,68	72,68
29	46,04			44,58	22,65	74,23
30	47,63			46,16	22,62	75,81
31	49,21			47,75	22,58	77,36
32	50,80			49,34	22,55	78,93
33	52,39			50,93	22,52	80,49
34	53,98			52,51	22,48	82,07
35	55,56			54,10	22,45	83,61
36	57,15			55,69	22,42	85,19
37	58,74			57,28	23,58	86,75
38	60,33			58,86	23,54	88,32
39	61,91			60,45	23,51	89,87
40	63,50			62,04	23,48	91,45
41	65,09			63,63	23,44	93,01
42	66,68			65,21	23,41	94,58
43	68,26			66,80	23,38	96,13
44	69,85	2	04.60	68,39	23,35	97,71
45	71,44	2	24,60	69,98	23,31	99,26
46	73,03			71,56	23,28	100,84
47	74,61			73,15	23,25	102,39
48	76,20			74,74		
49	77,79			76,33	23,18	105,52
50	79,38			77,91	23,14	107,10
51	80,96			79,50	23,11	108,65
52	82,55			81,09	23,08	110,18

Length	G			14		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
53	84,14			82,68	23,05	116,57
54	85,73			84,26	23,01	118,23
55	87,31			85,85		
56	88,90			87,44	22,95	121,53
57	90,49			89,03	22,91	123,16
58	92,08			90,61	22,88	124,83
59	93,66			92,20	22,85	126,46
60	95,25			93,79	22,81	128,12
61	96,84			95,38	22,78	129,75
62	98,43	2	24,60	96,96	22,75	131,41
63	100,01	_	,00	98,55	22,72	133,05
64	101,60			100,14	22,68	134,71
65	103,19			101,73	22,65	136,34
66	104,78			103,31	22,62	141,03
67	106,36			104,90	22,58	139,64
68	107,95			106,49	22,55	144,32
69	109,54			108,08	22,52	142,93
70	111,13			109,66	22,48	144,60
71	112,71			111,25	22,45	146,23
72	114,30			112,84	22,42	147,89
73	115,89	1		114,43	23,58	149,53
74	117,48	1		116,01	23,54	151,19
75	119,06			117,60	23,51	152,82
76	120,65			119,19	23,48	154,48
77	122,24			120,78	23,44	156,12
78	123,83			122,36	23,41	157,78
79	125,41			123,95	23,38	159,44
80	127,00			125,54	23,35	161,10
81	128,59			127,13	23,31	162,76
82	130,18	1		128,71	23,28	164,42
83	131,76	1		130,30	23,25	166,08
84	133,35	3	25,79	131,89	23,21	167,74
85	134,94			133,48	23,18	169,40
86	136,53			135,06	23,14	171,06
87	138,11			136,65	23,11	172,72
88	139,70			138,24	23,08	174,38
89	141,29			139,83	23,05	176,04
90	142,88			141,41	23,01	177,70
91	144,46	1		143,00	22,98	179,36
92	146,05			144,59	22,95	181,02
93	147,64			146,18	22,91	182,68
94	149,23			147,76	22,88	184,34
95	150,81			149,35	22,85	186,00
96	152,40			150,94	22,81	187,66

Table 4: Dimensions and tolerances for length (continued)

Length	G			14		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
97	153,99			152,53	22,78	189,32
98	155,58			154,11	22,75	190,98
99	157,16			155,70	22,72	192,64
100	158,75			157,29	22,68	194,30
101	160,34			158,88	22,65	195,96
102	161,93	3	25,79	160,46	22,62	197,62
103	163,51	3	25,79	162,05	22,58	199,28
104	165,10			163,64	22,55	200,94
105	166,69			165,23	22,52	202,60
106	168,28			166,81	22,48	204,26
107	169,86			168,40	22,45	205,92
108	171,45			169,99	22,42	207,58

Table 4: Dimensions and tolerances for length (continued)

Length	G			16			Length	G			16		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)	code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
10	15,88			14,41	26,61	55,14	35	55,56			54,10	25,78	95,41
11	17,46			16,00	26,58	56,61	36	57,15			55,69	25,75	96,99
12	19,05			17,59	26,54	58,10	37	58,74	1	26,75	57,28	25,71	98,55
13	20,64			19,18	26,51	59,58	38	60,33	'	20,73	58,86	25,68	100,12
14	22,23			20,76	26,48	61,08	39	61,91			60,45	25,65	101,67
15	23,81			22,35	26,44	62,54	40	63,50			62,04	25,62	103,25
16	25,40			23,94	26,41	64,04	41	65,09			63,63	26,91	104,81
17	26,99			25,53	26,38	65,51	42	66,68			65,21	26,87	106,38
18	28,58			27,11	26,34	67,01	43	68,26			66,80	26,84	107,93
19	30,16			28,70	26,31	68,48	44	69,85			68,39	26,81	109,51
20	31,75			30,29	26,28	69,97	45	71,44			69,98	26,77	111,06
21	33,34			31,88	26,24	71,45	46	73,03			71,56	26,74	112,64
22	34,93	1	26,75	33,46	26,21	72,95	47	74,61			73,15	26,71	114,19
23	36,51			35,05	26,18	74,41	48	76,20			74,74	26,68	115,77
24	38,10			36,64	26,14	75,91	49	77,79			76,33	26,64	117,32
25	39,69			38,23	26,11	77,39	50	79,38	2	28,07	77,91	26,61	118,90
26	41,28			39,81	26,08	78,88	51	80,96			79,50	26,58	120,45
27	42,86			41,40	26,05	82,90	52	82,55			81,09	26,54	121,98
28	44,45			42,99	26,01	84,48	53	84,14			82,68	26,51	128,37
29	46,04			44,58	25,98	86,03	54	85,73			84,26	26,48	130,03
30	47,63			46,16	25,95	87,61	55	87,31			85,85	26,44	131,66
31	49,21			47,75	25,91	89,16	56	88,90			87,44	26,41	133,33
32	50,80			49,34	25,88	90,73	57	90,49			89,03	26,38	134,96
33	52,39			50,93	25,85	92,29	58	92,08			90,61	26,34	136,63
34	53,98			52,51	25,81	93,87	59	93,66			92,20	26,31	138,26

Table 4 : Dimensions and tolerances for length (concluded)

Length	G			16		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
60	95,25			93,79	26,28	139,92
61	96,84			95,38	26,24	141,55
62	98,43			96,96	26,21	143,21
63	100,01			98,55	26,18	144,85
64	101,60			100,14	26,14	146,51
65	103,19			101,73	26,11	148,14
66	104,78			103,31	26,08	152,83
67	106,36			104,90	26,05	151,44
68	107,95			106,49	26,01	156,12
69	109,54			108,08	25,98	154,73
70	111,13	2	28,07	109,66	25,95	156,40
71	112,71			111,25	25,91	158,03
72	114,30			112,84	25,88	159,69
73	115,89			114,43	25,85	161,33
74	117,48			116,01	25,81	162,99
75	119,06			117,60	25,78	164,62
76	120,65			119,19	25,75	166,28
77	122,24			120,78	25,71	167,92
78	123,83			122,36	25,68	169,58
79	125,41			123,95	25,65	171,24
80	127,00			125,54	25,62	172,90
81	128,59			127,13	26,91	174,56
82	130,18			128,71	26,87	176,22
83	131,76			130,30	26,84	177,88
84	133,35			131,89	26,81	179,54
85	134,94			133,48	26,77	181,20
86	136,53	_	20.20	135,06	26,74	182,86
87	138,11	3	29,39	136,65	26,71	184,52
88	139,70			138,24	26,68	186,18
89	141,29			139,83	26,64	187,84
90	142,88			141,41	26,61	189,50
91	144,46			143,00	26,58	191,16
92	146,05			144,59	26,54	192,82

Length	G			16		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
93	147,64	3	29,39	146,18	26,51	194,48
94	149,23			147,76	26,48	196,14
95	150,81			149,35	26,44	197,80
96	152,40			150,94	26,41	199,46
97	153,99			152,53	26,38	201,12
98	155,58			154,11	26,34	202,78
99	157,16			155,70	26,31	204,44
100	158,75			157,29	26,28	206,10
101	160,34			158,88	26,24	207,76
102	161,93			160,46	26,21	209,42
103	163,51			162,05	26,18	211,08
104	165,10			163,64	26,14	212,74
105	166,69			165,23	26,11	214,40
106	168,28			166,81	26,08	216,06
107	169,86			168,40	26,05	217,72
108	171,45			169,99	26,01	219,38
109	173,04			171,58	25,98	221,04
110	174,63			173,16	25,95	222,70
111	176,21			174,75	25,91	224,36
112	177,80			176,34	25,88	226,02
113	179,39			177,93	25,85	227,68
114	180,98			179,51	25,81	229,34
115	182,56			181,10	25,78	231,00
116	184,15			182,69	25,75	232,66
117	185,74			184,28	25,71	234,32
118	187,33			185,86	25,68	235,98
119	188,91			187,45	25,65	237,64
120	190,50			189,04	25,62	239,30

Table 5 : Oversizes (Continued)

	R1									
Dia.	Pin	0	<i>α</i> .	G 14	V Gage		С	В		
code No.	nom. Dia.	Group No.	Ø A Max.	Ø A1 Min.	+ 0.005 - 0	Nom.	tolerance	Ref		
		-	-	-		-				
0)/	4000	2	9,04	7,82	6,58	0,96		0.50		
3X	.1900	3	9,30	8,08	0,50	1,06	± 0,05	8,52		
		4	9,58	8,33		1,18				
		-	-	-		-				
4X	.2500	2	11,73	10,49	9,59	0,83	± 0.06	9,28		
4/	.2300	3	12,09	10,82	0,00	0,97	± 0,06	9,20		
		4	12,42	11,15		1,11				
		-	-	-		-				
5X	.3125	2	14,33	13,06	12,16	0,83	± 0,06	10,8		
JA	.5125	3	14,68	13,41	,	0,98		10,0		
		4	15,04	13,74		1,12				
		-	-	-	_	-				
		2	17,07	15,75		1,00				
6X	.3750	3	17,45	16,13	14,47	1,16	± 0,07	11,82		
		4	17,83	16,48		1,31				
		5	18,21	16,87		1,47				
		-	-	-		-	± 0,08	13,47		
7X	.4375	2	20,07	18,29	16,71	1,31				
17	.4373	3	20,52	18,72		1,49				
		4	20,98	19,18		1,68				
		2	22,48	20,65		1,65	± 0,08	14,49		
8X	.5000	3	23,01	21,16	18,28	1,87				
ΟΛ	.5000	4	23,55	21,67	10,20	2,09				
		5	24,08	22,20		2,30				
		-	-	-		-				
9X	.5625	2	25,63	23,67	22,61	1,15	± 0,09	16,39		
JA	.0020	3	26,42	24,43	,01	1,48	_ 0,09	10,09		
		4	27,20	25,20		1,80				
		-	-	-		-				
10X	.6250	2	28,55	26,44	25,47	1,17	± 0,10	17,41		
10/1	.0200	3	29,41	27,25	_0,	1,52	0,10	17,-1		
		4	30,28	28,12		1,89				
		-	-	-		-				
12X	.7500	2	35,48	32,97	28,25	2,88	± 0,10	23,88		
14/\	.,,,,,,,	3	36,47	33,93	20,20	3,29		20,00		
		4	37,47	34,90		3,70				
		-	-	-		-				
14X	.8750	2	41,20	38,40	34,54	2,63	± 0,11	26,55		
1-7/1	.07.00	3	42,39	39,57	J-,U-	3,12		20,00		
		4	43,59	40,74		3,62				
		-	-	-		-				
16X	1.000	2	45,01	43,78	39,95	1,98	± 0,12	30,61		
10/1	1.000	3 46,33 45,10	55,55	2,53	± ∪,1∠	30,61				
		4	47,66	46,42		3,08				

Table 5 : Oversizes (concluded)

				ı	R2			
Dia.	Pin	Group	ØΑ	Ø A1	V Gage		С	В
code No.	nom. Dia.	No.	Max.	Min.	+ 0.005	Nom.	tolerance	Ref
		2	0.20	0.00		0.94		1
		3	9,30	8,08	1	0,84		
3Y	.1900	<u>4</u> 5	9,58	8,33	7,13	0,95	\pm 0,05	9,01
		-	9,86	8,59	-	1,07		
		3	12,09	10,82		0,97		
		4	12,42	11,15	0.50	1,10		
4Y	.2500	5	12,75	11,48	9,59	1,24	± 0,06	9,77
		-	-	-	1	-		
		3	14,68	13,41		0,98		
_,,		4	15,04	13,74	10.16	1,12		
5Y	.3125	5	15,39	14,10	12,16	1,27	± 0,06	11,29
		-	-	-	1	-		
		3	17,45	16,13		1,16		
0) (4	17,83	16,48	1	1,31		40.04
6Y	.3750	5	18,21	16,87	14,47	1,47	± 0,07	12,31
		6	18,59	17,25	1	1,63		
		3	20,52	18,72		1,49		
- >./	4075	4	20,98	19,18	1 40 74	1,68		40.00
7Y	.4375	5	21,44	19,61	16,71	1,87	± 0,08	13,96
		-	-	-		-		
		3	23,01	21,16		1,73	± 0,08	14,98
0)/	5000	4	23,55	21,67	40.00	1,95		
8Y	.5000	5	24,08	22,20	18,60	2,17		
		6	24,61	22,71		2,39		
		3	26,42	24,43		1,48		
9Y	EGOE	4	27,20	25,20	22.64	1,80	. 0.00	16.00
91	.5625	5	27,99	25,96	22,61	2,13	± 0,09	16,88
		-	-	-		-		
		3	29,41	27,25		1,52		
10Y	.6250	4	30,28	28,12	25,47	1,89	± 0,10	17,90
101	.0230	5	31,14	28,93	25,47	2,24	± 0,10	17,90
		-	-	-		-		
		3	36,47	33,93		2,57		
12Y	.7500	4	37,47	34,90	29,97	2,99	± 0,10	24,37
121	.7300	5	38,46	35,92	25,57	3,39	± 0,10	24,57
		-	-	-		-		
		3	42,39	39,57]	3,12		
14Y	.8750	4	43,59	40,74	34,54	3,62	± 0,11	27,04
171	.07.00	5	44,78	41,91	- 0,0	4,12	± 0,11	27,04
		-	-	-		-		1
		3	46,33	45,10		2,53		
16Y	1.000	4	47,66	46,42	39,95	3,07	± 0,12	31,10
		5	48,98	47,74		3,64		

Table 6 : Oversize	length 1	st Oversize	(Continued)
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Length	G	3					
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)	
1	1,59	-	-	-	-	-	
2	3,18	-	-	-	-	-	
3	4,76			3,30	5,32	1,12	
4	6,35			4,89	5,29	1,28	
5	7,94	2	5,35	6,48	5,26	1,43	
6	9,53		5,35	8,06	5,22	1,58	
7	11,11			9,65	5,19	1,73	
8	12,70			11,24	5,16	1,88	
9	14,29			12,83	5,39	2,17	
10	15,88			14,41	5,36	2,33	
11	17,46			16,00	5,32	2,49	
12	19,05	2	3 5,61	17,59	5,29	2,64	
13	20,64	3		19,18	5,26	2,79	
14	22,23			20,76	5,22	2,95	
15	23,81			22,35	5,19	3,10	
16	25,40			23,94	5,16	3,24	
17	26,99			25,53	5,39	3,68	
18	28,58			27,11	5,36	3,83	
19	30,16			28,70	5,32	3,99	
20	31,75	4	F 00	30,29	5,29	4,15	
21	33,34	4	5,88	31,88	5,26	4,30	
22	34,93			33,46	5,22	4,45	
23	36,51			35,05	5,19	4,60	
24	38,10			36,64	5,16	4,75	
25	39,69	-	-	-	-	-	
26	41,28	-	-	-	-	-	
27	42,86	-	-	-	-	-	
28	44,45	-	-	-	-	-	
29	46,04	-	•		-	-	
30	47,63	-	-	-	-	-	
31	49,21	-	•		-	-	
32	50,80	-	-	-	-	-	
33	52,39	-	•	-	-	-	

Length	G			4		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
1	1,59	-	-	-	-	1
2	3,18	-	-	-	-	1
3	4,76			3,30	6,98	1,83
4	6,35			4,89	6,95	2,10
5	7,94			6,48	6,92	2,37
6	9,53	2	7.00	8,06	6,88	2,63
7	11,11		7,00	9,65	6,85	2,89
8	12,70			11,24	6,82	3,15
9	14,29			12,83	6,78	3,40
10	15,88			14,41	6,75	3,65
11	17,46			16,00	7,05	4,20
12	19,05			17,59	7,02	4,47
13	20,64		7,33	19,18	6,98	4,74
14	22,23			20,76	6,95	5,01
15	23,81	3		22,35	6,92	5,28
16	25,40	3		23,94	6,88	5,54
17	26,99			25,53	6,85	5,80
18	28,58			27,11	6,82	6,06
19	30,16			28,70	6,78	6,31
20	31,75			30,29	6,75	6,57
21	33,34			31,88	7,05	7,38
22	34,93			33,46	7,02	7,66
23	36,51			35,05	6,98	7,93
24	38,10			36,64	6,95	8,19
25	39,69	4	7 66	38,23	6,92	8,46
26	41,28	4	7,66	39,81	6,88	8,72
27	42,86			41,40	6,85	8,98
28	44,45			42,99	6,82	9,24
29	46,04			44,58	6,78	9,50
30	47,63			46,16	6,75	9,75
31	49,21			47,75	7,05	10,85
32	50,80	5	7,99	49,34	7,02	11,13
33	52,39			50,93	6,98	11,40

Table 7: Oversize length 1st Oversize (Continued)

Length	G			5		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
1	1,59	-	-	-	-	-
2	3,18	-	-	-	-	-
3	4,76			3,30	8,64	2,80
4	6,35			4,89	8,61	3,21
5	7,94			6,48	8,58	3,62
6	9,53			8,06	8,54	4,02
7	11,11	2	8,64	9,65	8,51	4,42
8	12,70			11,24	8,48	4,82
9	14,29			12,83	8,44	5,21
10	15,88			14,41	8,41	5,60
11	17,46			16,00	8,38	5,99
12	19,05			17,59	8,71	6,82
13	20,64			19,18	8,67	7,24
14	22,23			20,76	8,64	7,65
15	23,81			22,35	8,61	8,06
16	25,40			23,94	8,58	8,47
17	26,99	3	9,01	25,53	8,54	8,88
18	28,58			27,11	8,51	9,28
19	30,16			28,70	8,48	9,68
20	31,75			30,29	8,44	10,07
21	33,34			31,88	8,41	10,46
22	34,93			33,46	8,38	10,85
23	36,51			35,05	8,71	12,07
24	38,10			36,64	8,67	12,48
25	39,69			38,23	8,64	12,90
26	41,28		•	39,81	8,61	13,31
27	42,86			41,40	8,58	13,71
28	44,45	4	9,37	42,99	8,54	14,12
29	46,04			44,58	8,51	14,52
30	47,63			46,16	8,48	14,92
31	49,21			47,75	8,44	15,31
32	50,80			49,34	8,41	15,70
33	52,39			50,93	8,38	16,09
34	53,98	-	-	-	-	-
35	55,56	-	-	-	-	-
36	57,15	-	-	-	-	-
-			_		_	
-	-	-		-	_	
-	-	-	-	-	-	-
-		-	-	-	-	
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

Length	G			6		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
1	1,59	-	-	-	-	-
2	3,18	-	-	-	-	ı
3	4,76	-	-	-	-	-
4	6,35			4,89	10,27	4,58
5	7,94			6,48	10,23	5,16
6	9,53			8,06	10,20	5,74
7	11,11			9,65	10,17	6,31
8	12,70	2	10,29	11,24	10,13	6,88
9	14,29			12,83	10,10	7,44
10	15,88			14,41	10,07	8,00
11	17,46			16,00	10,04	8,56
12	19,05			17,59	10,00	9,11
13	20,64			19,18	10,37	10,29
14	22,23			20,76	10,33	10,88
15	23,81			22,35	10,30	11,46
16	25,40			23,94	10,27	12,05
17	26,99			25,53	10,23	12,63
18	28,58	3	10,69	27,11	10,20	13,20
19	30,16		10,03	28,70	10,17	13,77
20	31,75			30,29	10,13	14,34
21	33,34			31,88	10,10	14,91
22	34,93			33,46	10,07	15,47
23	36,51		-	35,05	10,04	16,02
24	38,10			36,64	10,00	16,58
25	39,69			38,23	10,37	18,32
26	41,28			39,81	10,33	18,91
27	42,86			41,40	10,30	19,50
28	44,45			42,99	10,27	20,08
29	46,04			44,58	10,23	20,66
30	47,63	4	11,09	46,16	10,20	21,24
31	49,21		11,00	47,75	10,17	21,81
32	50,80			49,34	10,13	22,38
33	52,39			50,93	10,10	22,95
34	53,98			52,51	10,07	23,51
35	55,56			54,10	10,04	24,07
36	57,15			55,69	10,00	24,62
37	58,74			57,28	10,37	26,96
38	60,33			58,86	10,33	27,55
39	61,91			60,45	10,30	28,14
40	63,50	5	11,49	62,04	10,27	28,72
41	65,09		, .5	63,63	10,23	29,30
42	66,68			65,21	10,20	29,88
43	68,26			66,80	10,17	30,45
44	69,85			68,39	10,13	31,02

Table 8 : Oversize length 1st Oversize (Continued)

Length	G	6					
code No.		Group No.	ØD	K2 + 1,01 0	Ø D'	Mass (g)	
45	71,44			69,98	10,10	31,59	
46	73,03	5	11,49	71,56	10,07	32,15	
47	74,61	5	11,49	73,15	10,04	32,71	
48	76,20			74,74	10,00	33,26	

Table 9 : Oversize length 1st Oversize (Continued)

Length	G			7		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
5	7,94			6,48	11,96	7,19
6	9,53			8,06	11,93	7,98
7	11,11			9,65	11,89	8,76
8	12,70			11,24	11,86	9,54
9	14,29	2	12,00	12,83	11,83	10,31
10	15,88		12,00	14,41	11,79	11,08
11	17,46			16,00	11,76	11,85
12	19,05			17,59	11,73	12,61
13	20,64			19,18	11,69	13,36
14	22,23			20,76	11,66	14,12
15	23,81			22,35	12,09	15,85
16	25,40			23,94	12,06	16,65
17	26,99			25,53	12,02	17,46
18	28,58			27,11	11,99	18,25
19	30,16			28,70	11,96	19,04
20	31,75			30,29	11,93	19,83
21	33,34	3	12,47	31,88	11,89	20,62
22	34,93	3	12,47	33,46	11,86	21,40
23	36,51			35,05	11,83	22,17
24	38,10			36,64	11,79	22,94
25	39,69			38,23	11,76	23,71
26	41,28			39,81	11,73	24,47
27	42,86			41,40	11,69	25,23
28	44,45			42,99	11,66	25,98
29	46,04			44,58	12,09	28,60
30	47,63	4	12.02	46,16	12,06	29,41
31	49,21	4	12,93	47,75	12,02	30,21
32	50,80			49,34	11,99	31,00

Length	G			7		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
33	52,39	4	12,93	50,93	11,96	31,79
34	53,98			52,51	11,93	32,58
35	55,56			54,10	11,89	33,37
36	57,15			55,69	11,86	34,14
37	58,74			57,28	11,83	34,92
38	60,33			58,86	11,79	35,69
39	61,91			60,45	11,76	36,46
40	63,50			62,04	11,73	37,22
41	65,09			63,63	11,69	37,98
42	66,68			65,21	11,66	38,73
43	68,26			66,80	12,09	42,29
44	69,85			68,39	12,06	43,10
45	71,44			69,98	12,02	43,90
46	73,03			71,56	11,99	44,69
47	74,61			73,15	11,96	45,49
48	76,20			74,74	11,93	46,27
49	77,79	5	13,39	76,33	11,89	47,06
50	79,38	5	13,39	77,91	11,86	47,84
51	80,96			79,50	11,83	48,61
52	82,55			81,09	11,79	49,38
53	84,14			82,68	11,76	50,15
54	85,73			84,26	11,73	50,91
55	87,31			85,85	11,69	51,67
56	88,90			87,44	11,66	52,42

Table 10 : Oversize length 1st Oversize (Continued)

Length	G			8		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
5	7,94			6,48	13,68	9,30
6	9,53			8,06	13,64	10,33
7	11,11			9,65	13,61	11,36
8	12,70			11,24	13,58	12,38
9	14,29			12,83	13,54	13,40
10	15,88	2	13,72	14,41	13,51	14,41
11	17,46		13,72	16,00	13,48	15,41
12	19,05			17,59	13,44	16,41
13	20,64			19,18	13,41	17,41
14	22,23			20,76	13,38	18,40
15	23,81			22,35	13,35	19,39
16	25,40			23,94	13,31	20,37
17	26,99			25,53	13,81	22,79
18	28,58			27,11	13,77	23,84
19	30,16			28,70	13,74	24,88
20	31,75			30,29	13,71	25,92
21	33,34			31,88	13,68	26,96
22	34,93			33,46	13,64	27,99
23	36,51			35,05	13,61	29,02
24	38,10	3	14,25	36,64	13,58	30,04
25	39,69	3	14,25	38,23	13,54	31,05
26	41,28			39,81	13,51	32,06
27	42,86			41,40	13,48	33,07
28	44,45			42,99	13,44	34,07
29	46,04			44,58	13,41	35,07
30	47,63			46,16	13,38	36,06
31	49,21			47,75	13,35	37,05
32	50,80			49,34	13,31	38,03
33	52,39			50,93	13,81	41,79
34	53,98			52,51	13,77	42,84
35	55,56	4	14,78	54,10	13,74	43,89
36	57,15]		55,69	13,71	44,93
37	58,74			57,28	13,68	45,97

		ı				
Length	G			8		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
38	60,33	4	14,78	58,86	13,64	47,00
39	61,91			60,45	13,61	48,02
40	63,50			62,04	13,58	49,04
41	65,09			63,63	13,54	50,06
42	66,68			65,21	13,51	51,07
43	68,26			66,80	13,48	52,08
44	69,85			68,39	13,44	53,08
45	71,44			69,98	13,41	54,08
46	73,03			71,56	13,38	55,07
47	74,61			73,15	13,35	56,06
48	76,20			74,74	13,31	57,04
49	77,79			76,33	13,81	62,12
50	79,38			77,91	13,77	63,17
51	80,96			79,50	13,74	64,22
52	82,55			81,09	13,71	65,26
53	84,14			82,68	13,68	66,29
54	85,73			84,26	13,64	67,32
55	87,31			85,85	13,61	68,35
56	88,90	5	15,30	87,44	13,58	69,37
57	90,49	5	15,30	89,03	13,54	70,38
58	92,08			90,61	13,51	71,39
59	93,66			92,20	13,48	72,40
60	95,25			93,79	13,44	73,40
61	96,84			95,38	13,41	74,39
62	98,43			96,96	13,38	75,38
63	100,01			98,55	13,35	76,37
64	101,60			100,14	13,31	77,35

Table 11 : Oversize length 1st Oversize (Continued)

Length	G			9		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
6	9,53			8,06	15,77	13,81
7	11,11			9,65	15,74	15,64
8	12,70			11,24	15,70	17,50
9	14,29			12,83	15,67	17,91
10	15,88			14,41	15,64	19,26
11	17,46			16,00	15,60	20,61
12	19,05			17,59	15,57	21,96
13	20,64			19,18	15,54	23,30
14	22,23			20,76	15,50	24,63
15	23,81	2	15,82	22,35	15,47	25,95
16	25,40			23,94	15,44	27,28
17	26,99			25,53	15,41	28,59
18	28,58			27,11	15,37	29,90
19	30,16			28,70	15,34	31,21
20	31,75			30,29	15,31	32,50
21	33,34			31,88	15,27	33,80
22	34,93			33,46	15,24	35,09
23	36,51			35,05	15,21	36,37
24	38,10			36,64	15,17	37,65
25	39,69			38,23	15,93	42,56
26	41,28			39,81	15,90	43,96
27	42,86			41,40	15,87	45,36
28	44,45			42,99	15,83	46,75
29	46,04			44,58	15,80	48,14
30	47,63			46,16	15,77	49,52
31	49,21			47,75	15,74	50,89
32	50,80			49,34	15,70	52,26
33	52,39	2	16.60	50,93	15,67	53,62
34	53,98	3	16,62	52,51	15,64	54,98
35	55,56			54,10	15,60	56,33
36	57,15			55,69	15,57	57,67
37	58,74			57,28	15,54	59,01
38	60,33			58,86	15,50	60,35
39	61,91			60,45	15,47	61,67
40	63,50			62,04	15,44	63,00
41	65,09			63,63	15,41	64,31
42	66,68			65,21	15,37	65,63

Length	G			9		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
43	68,26	3	16,62	66,80	15,34	66,93
44	69,85			68,39	15,31	68,23
45	71,44			69,98	15,27	69,53
46	73,03			71,56	15,24	70,82
47	74,61			73,15	15,21	72,10
48	76,20			74,74	15,17	73,38
49	77,79	4	17,41	76,33	15,93	81,77
50	79,38			77,91	15,90	83,17
51	80,96			79,50	15,87	84,57
52	82,55			81,09	15,83	85,96
53	84,14			82,68	15,80	87,35
54	85,73			84,26	15,77	88,72
55	87,31			85,85	15,74	90,10
56	88,90			87,44	15,70	91,47
57	90,49			89,03	15,67	92,83
58	92,08			90,61	15,64	94,18
59	93,66			92,20	15,60	95,53
60	95,25			93,79	15,57	96,88
61	96,84			95,38	15,54	98,22
62	98,43			96,96	15,50	99,55
63	100,01			98,55	15,47	100,88
64	101,60			100,14	15,44	102,20
65	103,19			101,73	15,41	103,52
66	104,78			103,31	15,37	104,83
67	106,36			104,90	15,34	106,14
68	107,95			106,49	15,31	107,44
69	109,54			108,08	15,27	108,73
70	111,13			109,66	15,24	110,02
71	112,71			111,25	15,21	111,30
72	114,30			112,84	15,17	112,58

Table 12 : Oversize length 1st Oversize (Continued)

Length	G			10		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
7	11,11			9,65	17,47	19,01
8	12,70			11,24	17,44	20,69
9	14,29			12,83	17,41	22,37
10	15,88			14,41	17,37	24,04
11	17,46			16,00	17,34	25,70
12	19,05			17,59	17,31	27,36
13	20,64			19,18	17,27	29,01
14	22,23			20,76	17,24	30,66
15	23,81			22,35	17,21	32,29
16	25,40	2	17 56	23,94	17,18	33,92
17	26,99		17,56	25,53	17,14	35,55
18	28,58			27,11	17,11	37,17
19	30,16			28,70	17,08	38,78
20	31,75			30,29	17,04	40,39
21	33,34			31,88	17,01	41,99
22	34,93			33,46	16,98	43,59
23	36,51			35,05	16,94	45,17
24	38,10			36,64	16,91	46,75
25	39,69			38,23	16,88	48,33
26	41,28			39,81	16,85	49,90
27	42,86			41,40	17,67	56,17
28	44,45			42,99	17,64	57,89
29	46,04			44,58	17,60	59,61
30	47,63			46,16	17,57	61,32
31	49,21			47,75	17,54	63,01
32	50,80			49,34	17,51	64,71
33	52,39			50,93	17,47	66,40
34	53,98			52,51	17,44	68,09
35	55,56			54,10	17,41	69,75
36	57,15	2	10 10	55,69	17,37	71,43
37	58,74	3	18,42	57,28	17,34	73,09
38	60,33			58,86	17,31	74,75
39	61,91			60,45	17,27	76,39
40	63,50			62,04	17,24	78,04
41	65,09			63,63	17,21	79,68
42	66,68			65,21	17,18	81,32
43	68,26			66,80	17,14	82,94
44	69,85			68,39	17,11	84,56
45	71,44			69,98	17,08	86,17
46	73,03			71,56	17,04	87,78

Length	G			10		
	3			+ 1,01		
code No.		Group No.	Ø D	K2 0	Ø D'	Mass (g)
47	74,61	3	18,42	73,15	17,01	89,38
48	76,20			74,74	16,98	90,98
49	77,79			76,33	16,94	92,57
50	79,38			77,91	16,91	94,15
51	80,96			79,50	16,88	95,72
52	82,55			81,09	16,85	97,29
53	84,14			82,68	17,67	108,17
54	85,73			84,26	17,64	109,90
55	87,31			85,85	17,60	111,60
56	88,90			87,44	17,57	113,31
57	90,49			89,03	17,54	115,02
58	92,08			90,61	17,51	116,72
59	93,66			92,20	17,47	118,40
60	95,25			93,79	17,44	120,08
61	96,84			95,38	17,41	121,76
62	98,43			96,96	17,37	123,43
63	100,01			98,55	17,34	125,09
64	101,60			100,14	17,31	126,75
65	103,19	4	19,28	101,73	17,27	128,40
66	104,78	4	19,20	103,31	17,24	130,05
67	106,36			104,90	17,21	131,68
68	107,95			106,49	17,18	133,32
69	109,54			108,08	17,14	134,95
70	111,13			109,66	17,11	136,57
71	112,71			111,25	17,08	138,18
72	114,30			112,84	17,04	139,79
73	115,89			114,43	17,01	141,39
74	117,48			116,01	16,98	142,99
75	119,06			117,60	16,94	144,57
76	120,65			119,19	16,91	146,16
77	122,24			120,78	16,88	147,73
78	123,83			122,36	16,85	149,31

Table 13 : Oversize length 1st Oversize (Continued)

Length	G			12		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
8	12,70			11,24	20,92	32,92
9	14,29			12,83	20,89	35,34
10	15,88			14,41	20,86	37,76
11	17,46			16,00	20,83	40,15
12	19,05			17,59	20,79	42,55
13	20,64			19,18	20,76	44,94
14	22,23			20,76	20,73	47,33
15	23,81			22,35	20,69	49,69
16	25,40			23,94	20,66	52,06
17	26,99			25,53	20,63	54,42
18	28,58			27,11	20,59	56,78
19	30,16	2	21,00	28,70	20,56	59,11
20	31,75			30,29	20,53	61,45
21	33,34			31,88	20,50	63,78
22	34,93			33,46	20,46	66,11
23	36,51			35,05	20,43	68,41
24	38,10			36,64	20,40	70,72
25	39,69			38,23	20,36	73,03
26	41,28			39,81	20,33	75,32
27	42,86			41,40	20,30	77,60
28	44,45			42,99	20,26	79,88
29	46,04			44,58	20,23	82,15
30	47,63			46,16	20,20	84,42
31	49,21			47,75	21,16	94,19
32	50,80			49,34	21,13	96,66
33	52,39			50,93	21,09	99,13
34	53,98			52,51	21,06	101,59
35	55,56			54,10	21,03	104,03
36	57,15			55,69	20,99	106,48
37	58,74			57,28	20,96	108,92
38	60,33			58,86	20,92	111,35
39	61,91	1		60,45	20,89	113,75
40	63,50	1		62,04	20,86	116,17
41	65,09	3	21,99	63,63	20,83	118,58
42	66,68	1		65,21	20,79	120,98
43	68,26	1		66,80	20,76	123,36
44	69,85	1		68,39	20,73	125,74
45	71,44	1		69,98	20,69	128,12
46	73,03	1		71,56	20,66	130,49
47	74,61	1		73,15	20,63	132,84
48	76,20	1		74,74	20,59	135,19
49	77,79	1		76,33	20,56	137,54
50	79,38	1		77,91	20,53	139,88
51	80,96	1		79,50	20,50	142,20

Length	G		12								
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)					
52	82,55			81,09	20,46	153,74					
53	84,14			82,68	20,43	156,02					
54	85,73			84,26	20,40	158,31					
55	87,31			85,85	20,36	160,56					
56	88,90	3	21,99	87,44	20,33	162,83					
57	90,49			89,03	20,30	179,90					
58	92,08			90,61	20,26	182,38					
59	93,66			92,20	20,23	184,83					
60	95,25			93,79	20,20	187,29					
61	96,84			95,38	21,16	189,74					
62	98,43			96,96	21,13	192,19					
63	100,01			98,55	21,09	194,61					
64	101,60			100,14	21,06	197,04					
65	103,19			101,73	21,03	199,47					
66	104,78			103,31	20,99	201,88					
67	106,36			104,90	20,96	204,28					
68	107,95			106,49	20,92	206,68					
69	109,54			108,08	20,89	209,07					
70	111,13			109,66	20,86	211,45					
71	112,71			111,25	20,83	213,82					
72	114,30			112,84	20,79	216,19					
73	115,89			114,43	20,76	218,55					
74	117,48			116,01	20,73	220,91					
75	119,06	4	22,98	117,60	20,69	223,25					
76	120,65	4	22,90	119,19	20,66	225,58					
77	122,24			120,78	20,63	227,91					
78	123,83			122,36	20,59	230,23					
79	125,41			123,95	20,56	232,54					
80	127,00			125,54	20,53	234,86					
81	128,59			127,13	20,50	237,16					
82	130,18			128,71	20,46	239,45					
83	131,76			130,30	20,43	241,72					
84	133,35			131,89	20,40	244,01					
85	134,94			133,48	20,36	246,28					
86	136,53			135,06	20,33	248,54					
87	138,11			136,65	20,30	153,74					
88	139,70			138,24	20,26	156,02					
89	141,29		ļ	139,83	20,23	158,31					
90	142,88			141,41	20,20	160,56					

Table 14 : Oversize length 1st Oversize (Continued)

Length	G			14		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
9	14,29			12,83	24,50	49,22
10	15,88			14,41	24,47	52,54
11	17,46			16,00	24,44	55,83
12	19,05			17,59	24,40	59,13
13	20,64			19,18	24,37	62,42
14	22,23			20,76	24,34	65,70
15	23,81			22,35	24,30	68,95
16	25,40			23,94	24,27	72,21
17	26,99			25,53	24,24	75,47
18	28,58			27,11	24,20	78,71
19	30,16			28,70	24,17	81,93
20	31,75			30,29	24,14	85,16
21	33,34			31,88	24,10	88,38
22	34,93	2	24,60	33,46	24,07	91,59
23	36,51		24,00	35,05	24,04	94,77
24	38,10			36,64	24,01	97,96
25	39,69			38,23	23,97	101,15
26	41,28			39,81	23,94	104,32
27	42,86			41,40	23,91	107,47
28	44,45			42,99	23,87	110,63
29	46,04			44,58	23,84	113,78
30	47,63			46,16	23,81	116,92
31	49,21			47,75	23,77	120,03
32	50,80			49,34	23,74	123,16
33	52,39			50,93	23,71	126,27
34	53,98			52,51	23,68	129,38
35	55,56			54,10	23,64	132,46
36	57,15			55,69	23,61	135,55
37	58,74			57,28	24,77	151,24
38	60,33			58,86	24,73	154,63
39	61,91			60,45	24,70	157,99
40	63,50			62,04	24,67	161,36
41	65,09			63,63	24,64	164,72
42	66,68			65,21	24,60	168,07
43	68,26			66,80	24,57	171,40
44	69,85	3	25.70	68,39	24,54	174,73
45	71,44	٥	25,79	69,98	24,50	178,06
46	73,03			71,56	24,47	181,37
47	74,61			73,15	24,44	184,66
48	76,20			74,74	24,40	187,96
49	77,79			76,33	24,37	191,25
50	79,38			77,91	24,34	194,53
51	80,96			79,50	24,30	197,79
52	82,55			81,09	24,27	201,05

Length	G			14		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
53	84,14			82,68	24,24	204,30
54	85,73			84,26	24,20	207,55
55	87,31			85,85	24,17	210,77
56	88,90			87,44	24,14	214,00
57	90,49			89,03	24,10	217,22
58	92,08			90,61	24,07	220,43
59	93,66			92,20	24,04	223,61
60	95,25			93,79	24,01	226,80
61	96,84			95,38	23,97	229,99
62	98,43	3	25,79	96,96	23,94	233,17
63	100,01	Ŭ	20,10	98,55	23,91	236,31
64	101,60			100,14	23,87	239,47
65	103,19			101,73	23,84	242,62
66	104,78			103,31	23,81	245,77
67	106,36			104,90	23,77	248,88
68	107,95			106,49	23,74	252,00
69	109,54			108,08	23,71	255,12
70	111,13			109,66	23,68	258,23
71	112,71			111,25	23,64	261,30
72	114,30			112,84	23,61	264,39
73	115,89			114,43	24,77	292,41
74	117,48			116,01	24,73	295,80
75	119,06			117,60	24,70	299,16
76	120,65			119,19	24,67	302,53
77	122,24			120,78	24,64	305,89
78	123,83			122,36	24,60	309,24
79	125,41			123,95	24,57	312,58
80	127,00			125,54	24,54	315,91
81	128,59			127,13	24,50	319,23
82	130,18			128,71	24,47	322,54
83	131,76			130,30	24,44	325,84
84	133,35	4	26,98	131,89	24,40	329,14
85	134,94		,	133,48	24,37	332,43
86	136,53			135,06	24,34	335,71
87	138,11			136,65	24,30	338,96
88	139,70			138,24	24,27	342,23
89	141,29			139,83	24,24	345,48
90	142,88			141,41	24,20	348,73
91	144,46			143,00	24,17	351,96
92	146,05			144,59	24,14	355,19
93	147,64			146,18	24,10	358,40
94	149,23			147,76	24,07	361,61
95	150,81			149,35	24,04	364,81
96	152,40			150,94	24,01	368,00

Table 15 : Oversize length 1st Oversize (Continued)

Length	G			14		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
97	153,99			152,53	23,97	371,18
98	155,58			154,11	23,94	374,36
99	157,16			155,70	23,91	377,52
100	158,75			157,29	23,87	380,68
101	160,34			158,88	23,84	383,82
102	161,93	4	26,98	160,46	23,81	386,96
103	163,51	4	20,90	162,05	23,77	390,09
104	165,10			163,64	23,74	393,21
105	166,69			165,23	23,71	396,32
106	168,28			166,81	23,68	399,43
107	169,86			168,40	23,64	402,52
108	171,45			169,99	23,61	405,61

Table 16 : Oversize length 1st Oversize (Continued)

Length	G			16			Length	G			16		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)	code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
10	15,88			14,41	27,93	67,16	35	55,56			54,10	27,10	171,53
11	17,46			16,00	27,90	71,43	36	57,15			55,69	27,07	175,59
12	19,05			17,59	27,86	75,73	37	58,74	2	28,07	57,28	27,04	179,63
13	20,64			19,18	27,83	80,01	38	60,33	_	20,07	58,86	27,00	183,66
14	22,23			20,76	27,80	84,28	39	61,91			60,45	26,97	187,66
15	23,81			22,35	27,76	88,52	40	63,50			62,04	26,94	191,68
16	25,40			23,94	27,73	92,77	41	65,09			63,63	28,23	213,27
17	26,99			25,53	27,70	97,01	42	66,68			65,21	28,19	217,67
18	28,58			27,11	27,66	101,24	43	68,26			66,80	28,16	222,02
19	30,16			28,70	27,63	105,44	44	69,85			68,39	28,13	226,40
20	31,75			30,29	27,60	109,65	45	71,44			69,98	28,09	230,76
21	33,34			31,88	27,56	113,85	46	73,03			71,56	28,06	235,11
22	34,93	2	28,07	33,46	27,53	118,04	47	74,61			73,15	28,03	239,43
23	36,51			35,05	27,50	122,20	48	76,20			74,74	28,00	243,76
24	38,10			36,64	27,47	126,37	49	77,79			76,33	27,96	248,09
25	39,69			38,23	27,43	130,53	50	79,38	3	29,39	77,91	27,93	252,40
26	41,28			39,81	27,40	134,69	51	80,96			79,50	27,90	256,68
27	42,86			41,40	27,37	138,80	52	82,55			81,09	27,86	260,97
28	44,45			42,99	27,33	142,94	53	84,14			82,68	27,83	265,25
29	46,04			44,58	27,30	147,06	54	85,73			84,26	27,80	269,52
30	47,63			46,16	27,27	151,17	55	87,31			85,85	27,76	273,76
31	49,21			47,75	27,23	155,25	56	88,90			87,44	27,73	278,01
32	50,80			49,34	27,20	159,34	57	90,49			89,03	27,70	282,25
33	52,39			50,93	27,17	163,42	58	92,08			90,61	27,66	286,49
34	53,98			52,51	27,13	167,50	59	93,66			92,20	27,63	290,68

Table 17 : Oversize length 1st Oversize (Concluded)

Length	G			16		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
60	95,25			93,79	27,60	294,89
61	96,84		•	95,38	27,56	299,10
62	98,43			96,96	27,53	303,29
63	100,01			98,55	27,50	307,44
64	101,60			100,14	27,47	311,62
65	103,19			101,73	27,43	315,78
66	104,78			103,31	27,40	319,93
67	106,36			104,90	27,37	324,05
68	107,95			106,49	27,33	328,18
69	109,54			108,08	27,30	332,30
70	111,13	3	29,39	109,66	27,27	336,41
71	112,71			111,25	27,23	340,49
72	114,30			112,84	27,20	344,58
73	115,89			114,43	27,17	348,67
74	117,48			116,01	27,13	352,74
75	119,06			117,60	27,10	356,78
76	120,65			119,19	27,07	360,83
77	122,24			120,78	27,04	364,87
78	123,83			122,36	27,00	368,91
79	125,41			123,95	26,97	372,92
80	127,00			125,54	26,94	376,92
81	128,59			127,13	28,23	415,80
82	130,18			128,71	28,19	420,18
83	131,76			130,30	28,16	424,55
84	133,35			131,89	28,13	428,93
85	134,94			133,48	28,09	433,29
86	136,53	4	30,71	135,06	28,06	437,63
87	138,11	+	30,71	136,65	28,03	441,95
88	139,70			138,24	28,00	446,30
89	141,29			139,83	27,96	450,61
90	142,88			141,41	27,93	454,92
91	144,46			143,00	27,90	459,22
92	146,05			144,59	27,86	463,51

Length	G			16		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
93	147,64	4	30,71	146,18	27,83	467,78
94	149,23]	1	147,76	27,80	472,05
95	150,81]	1	149,35	27,76	476,31
96	152,40]	1	150,94	27,73	480,55
97	153,99		1	152,53	27,70	484,79
98	155,58]	1	154,11	27,66	489,02
99	157,16]		155,70	27,63	493,23
100	158,75]	1	157,29	27,60	497,44
101	160,34]	1	158,88	27,56	501,64
102	161,93		1	160,46	27,53	505,82
103	163,51]	1	162,05	27,50	510,00
104	165,10		1	163,64	27,47	514,17
105	166,69]	1	165,23	27,43	518,32
106	168,28]	1	166,81	27,40	522,47
107	169,86]	1	168,40	27,37	526,61
108	171,45]	1	169,99	27,33	530,74
109	173,04]	1	171,58	27,30	534,85
110	174,63		1	173,16	27,27	538,96
111	176,21]	1	174,75	27,23	543,06
112	177,80]		176,34	27,20	547,14
113	179,39]	1	177,93	27,17	551,22
114	180,98]	1	179,51	27,13	555,29
115	182,56		1	181,10	27,10	559,35
116	184,15]	1	182,69	27,07	563,39
117	185,74		1	184,28	27,04	567,43
118	187,33]	1	185,86	27,00	571,46
119	188,91]		187,45	26,97	575,48
120	190,50]		189,04	26,94	579,49

Table 18: Oversize length 2nd Oversize (Continued)

Length	G		3					
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)		
1	1,59	-	-	-	-	-		
2	3,18	-	-	-	-	-		
3	4,76			3,30	5,59	1,21		
4	6,35			4,89	5,55	1,38		
5	7,94	3	5,61	6,48	5,52	1,55		
6	9,53	3	5,01	8,06	5,49	1,72		
7	11,11			9,65	5,46	1,88		
8	12,70			11,24	5,42	2,05		
9	14,29			12,83	5,65	2,37		
10	15,88			14,41	5,62	2,54		
11	17,46		5,88	16,00	5,59	2,71		
12	19,05	4		17,59	5,55	2,89		
13	20,64	4		19,18	5,52	3,06		
14	22,23			20,76	5,49	3,22		
15	23,81			22,35	5,46	3,39		
16	25,40			23,94	5,42	3,55		
17	26,99			25,53	5,65	4,00		
18	28,58			27,11	5,62	4,18		
19	30,16			28,70	5,59	4,35		
20	31,75	_	6 1 1	30,29	5,55	4,52		
21	33,34	5	6,14	31,88	5,52	4,69		
22	34,93			33,46	5,49	4,86		
23	36,51			35,05	5,46	5,02		
24	38,10			36,64	5,42	5,19		
25	39,69	-	-	-	-	-		
26	41,28	-	-	-	-	-		
27	42,86	-	-	-	-	-		
28	44,45	-		-		-		
29	46,04	-	-	-	-	-		
30	47,63	-		-		-		
31	49,21	-	-	-	-	-		
32	50,80	-		-	-	-		
33	52,39	-	-	-	-	-		

Length	G			4		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
1	1,59	-	-	-	-	-
2	3,18	-	-	-	-	-
3	4,76			3,30	7,31	1,97
4	6,35			4,89	7,28	2,27
5	7,94			6,48	7,25	2,56
6	9,53	3	7 22	8,06	7,21	2,85
7	11,11	3	7,33	9,65	7,18	3,13
8	12,70			11,24	7,15	3,42
9	14,29			12,83	7,11	3,70
10	15,88			14,41	7,08	3,97
11	17,46			16,00	7,38	4,56
12	19,05			17,59	7,35	4,86
13	20,64		7,66	19,18	7,31	5,16
14	22,23			20,76	7,28	5,45
15	23,81	4		22,35	7,25	5,74
16	25,40	4		23,94	7,21	6,03
17	26,99			25,53	7,18	6,31
18	28,58			27,11	7,15	6,60
19	30,16			28,70	7,11	6,88
20	31,75			30,29	7,08	7,16
21	33,34			31,88	7,38	8,03
22	34,93			33,46	7,35	8,32
23	36,51			35,05	7,31	8,62
24	38,10			36,64	7,28	8,91
25	39,69	_	7.00	38,23	7,25	9,20
26	41,28	5	7,99	39,81	7,21	9,49
27	42,86]		41,40	7,18	9,78
28	44,45			42,99	7,15	10,06
29	46,04			44,58	7,11	10,34
30	47,63			46,16	7,08	10,62
31	49,21			47,75	7,38	11,78
32	50,80	6	8,32	49,34	7,35	12,08
33	52,39			50,93	7,31	12,38

Table 19 : Oversize length 2nd Oversize (Continued)

Length	G			5		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
1	1,59	-	-	-	-	-
2	3,18	1	-	-	-	-
3	4,76			3,30	9,00	2,99
4	6,35			4,89	8,97	3,44
5	7,94			6,48	8,94	3,88
6	9,53			8,06	8,91	4,32
7	11,11	3	9,01	9,65	8,87	4,76
8	12,70			11,24	8,84	5,19
9	14,29			12,83	8,81	5,62
10	15,88			14,41	8,77	6,04
11	17,46			16,00	8,74	6,47
12	19,05			17,59	9,07	7,34
13	20,64			19,18	9,04	7,79
14	22,23			20,76	9,00	8,24
15	23,81			22,35	8,97	8,69
16	25,40			23,94	8,94	9,13
17	26,99	4	9,37	25,53	8,91	9,57
18	28,58			27,11	8,87	10,00
19	30,16			28,70	8,84	10,44
20	31,75			30,29	8,81	10,86
21	33,34			31,88	8,77	11,29
22	34,93			33,46	8,74	11,71
23	36,51			35,05	9,07	13,02
24	38,10			36,64	9,04	13,48
25	39,69			38,23	9,00	13,93
26	41,28			39,81	8,97	14,37
27	42,86			41,40	8,94	14,81
28	44,45	5	9,74	42,99	8,91	15,25
29	46,04			44,58	8,87	15,69
30	47,63			46,16	8,84	16,12
31	49,21			47,75	8,81	16,55
32	50,80			49,34	8,77	16,98
33	52,39			50,93	8,74	17,40
34	53,98	-	-	-	-	-
35	55,56	-	-	-	-	-
36	57,15	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	1	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

Length	G			6		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
1	1,59	-	-	-	-	-
2	3,18	-	-	-	-	-
3	4,76	-	-	-	-	-
4	6,35			4,89	10,67	4,81
5	7,94			6,48	10,63	5,44
6	9,53			8,06	10,60	6,06
7	11,11			9,65	10,57	6,68
8	12,70	3	10,69	11,24	10,53	7,29
9	14,29			12,83	10,50	7,90
10	15,88			14,41	10,47	8,50
11	17,46			16,00	10,43	9,11
12	19,05			17,59	10,40	9,70
13	20,64			19,18	10,76	10,95
14	22,23			20,76	10,73	11,58
15	23,81			22,35	10,70	12,22
16	25,40			23,94	10,67	12,85
17	26,99			25,53	10,63	13,47
18	28,58	4	11,09	27,11	10,60	14,09
19	30,16	7	11,03	28,70	10,57	14,71
20	31,75			30,29	10,53	15,32
21	33,34			31,88	10,50	15,93
22	34,93			33,46	10,47	16,54
23	36,51			35,05	10,43	17,14
24	38,10			36,64	10,40	17,74
25	39,69			38,23	10,76	19,56
26	41,28			39,81	10,73	20,20
27	42,86			41,40	10,70	20,83
28	44,45			42,99	10,67	21,46
29	46,04			44,58	10,63	22,09
30	47,63	5	11,49	46,16	10,60	22,71
31	49,21		,	47,75	10,57	23,33
32	50,80			49,34	10,53	23,94
33	52,39	ļ		50,93	10,50	24,55
34	53,98	ļ		52,51	10,47	25,16
35	55,56			54,10	10,43	25,76
36	57,15			55,69	10,40	26,36
37	58,74			57,28	10,76	28,83
38	60,33			58,86	10,73	29,47
39	61,91			60,45	10,70	30,10
40	63,50	6	11,89	62,04	10,67	30,73
41	65,09		,,,,,,	63,63	10,63	31,36
42	66,68			65,21	10,60	31,98
43	68,26			66,80	10,57	32,60
44	69,85			68,39	10,53	33,22

Table 20 : Oversize length 2nd Oversize (Continued)

Length	G	5				
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
45	71,44		11,89	69,98	10,50	33,83
46	73,03	6		71,56	10,47	34,43
47	74,61	O		73,15	10,43	35,04
48	76,20			74,74	10,40	35,64

Table 21 : Oversize length 2nd Oversize (Continued)

Length	G			7		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
5	7,94			6,48	12,42	7,65
6	9,53			8,06	12,39	8,50
7	11,11			9,65	12,36	9,35
8	12,70			11,24	12,32	10,19
9	14,29	3	12,47	12,83	12,29	11,02
10	15,88	3	12,41	14,41	12,26	11,85
11	17,46			16,00	12,23	12,68
12	19,05			17,59	12,19	13,50
13	20,64			19,18	12,16	14,32
14	22,23			20,76	12,13	15,14
15	23,81			22,35	12,56	16,96
16	25,40			23,94	12,52	17,83
17	26,99			25,53	12,49	18,69
18	28,58			27,11	12,46	19,55
19	30,16			28,70	12,42	20,40
20	31,75			30,29	12,39	21,25
21	33,34	4	12.02	31,88	12,36	22,09
22	34,93	4	12,93	33,46	12,32	22,94
23	36,51			35,05	12,29	23,77
24	38,10			36,64	12,26	24,60
25	39,69			38,23	12,23	25,43
26	41,28			39,81	12,19	26,25
27	42,86			41,40	12,16	27,07
28	44,45			42,99	12,13	27,88
29	46,04	_		44,58	12,56	30,63
30	47,63	_	40.00	46,16	12,52	31,50
31	49,21	5	13,39	47,75	12,49	32,36
32	50,80			49,34	12,46	33,22

Length	G			7		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
33	52,39	5	13,39	50,93	12,42	34,08
34	53,98			52,51	12,39	34,92
35	55,56			54,10	12,36	35,77
36	57,15			55,69	12,32	36,61
37	58,74			57,28	12,29	37,45
38	60,33			58,86	12,26	38,28
39	61,91			60,45	12,23	39,10
40	63,50			62,04	12,19	39,93
41	65,09			63,63	12,16	40,74
42	66,68			65,21	12,13	41,56
43	68,26			66,80	12,56	45,27
44	69,85			68,39	12,52	46,13
45	71,44			69,98	12,49	47,00
46	73,03			71,56	12,46	47,85
47	74,61			73,15	12,42	48,71
48	76,20			74,74	12,39	49,56
49	77,79	6	13,85	76,33	12,36	50,40
50	79,38	0	13,03	77,91	12,32	51,24
51	80,96			79,50	12,29	52,08
52	82,55			81,09	12,26	52,91
53	84,14			82,68	12,23	53,73
54	85,73			84,26	12,19	54,56
55	87,31			85,85	12,16	55,37
56	88,90			87,44	12,13	56,19

Table 22 : Oversize length 2nd Oversize (Continued)

Length	G			8		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
5	7,94			6,48	14,21	9,91
6	9,53			8,06	14,17	11,02
7	11,11			9,65	14,14	12,13
8	12,70			11,24	14,11	13,23
9	14,29			12,83	14,07	14,32
10	15,88	3	14,25	14,41	14,04	15,42
11	17,46	3	14,23	16,00	14,01	16,50
12	19,05			17,59	13,98	17,58
13	20,64			19,18	13,94	18,66
14	22,23			20,76	13,91	19,73
15	23,81			22,35	13,88	20,79
16	25,40			23,94	13,84	21,85
17	26,99			25,53	14,34	24,42
18	28,58			27,11	14,31	25,56
19	30,16			28,70	14,27	26,68
20	31,75			30,29	14,24	27,81
21	33,34			31,88	14,21	28,92
22	34,93			33,46	14,17	30,03
23	36,51			35,05	14,14	31,14
24	38,10	4	4470	36,64	14,11	32,24
25	39,69	4	14,78	38,23	14,07	33,34
26	41,28			39,81	14,04	34,43
27	42,86			41,40	14,01	35,51
28	44,45			42,99	13,98	36,60
29	46,04			44,58	13,94	37,67
30	47,63			46,16	13,91	38,74
31	49,21			47,75	13,88	39,81
32	50,80			49,34	13,84	40,87
33	52,39			50,93	14,34	44,77
34	53,98			52,51	14,31	45,90
35	55,56	5	15,30	54,10	14,27	47,03
36	57,15			55,69	14,24	48,15
37	58,74			57,28	14,21	49,27

		ı				
Length	G			8		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
38	60,33	5	15,30	58,86	14,17	50,38
39	61,91			60,45	14,14	51,48
40	63,50			62,04	14,11	52,58
41	65,09			63,63	14,07	53,68
42	66,68			65,21	14,04	54,77
43	68,26			66,80	14,01	55,85
44	69,85			68,39	13,98	56,93
45	71,44			69,98	13,94	58,01
46	73,03			71,56	13,91	59,08
47	74,61			73,15	13,88	60,14
48	76,20			74,74	13,84	61,20
49	77,79			76,33	14,34	66,60
50	79,38			77,91	14,31	67,73
51	80,96			79,50	14,27	68,86
52	82,55			81,09	14,24	69,98
53	84,14			82,68	14,21	71,09
54	85,73			84,26	14,17	72,20
55	87,31			85,85	14,14	73,31
56	88,90	6	15,83	87,44	14,11	74,41
57	90,49	U	13,03	89,03	14,07	75,50
58	92,08			90,61	14,04	76,59
59	93,66			92,20	14,01	77,68
60	95,25			93,79	13,98	78,76
61	96,84			95,38	13,94	79,84
62	98,43			96,96	13,91	80,90
63	100,01			98,55	13,88	81,97
64	101,60			100,14	13,84	83,03

Table 23 : Oversize length 2nd Oversize (Continued)

Length	G			9		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
6	9,53			8,06	16,56	14,95
7	11,11			9,65	16,53	16,94
8	12,70			11,24	16,50	18,98
9	14,29			12,83	16,46	19,47
10	15,88			14,41	16,43	20,97
11	17,46			16,00	16,40	22,46
12	19,05			17,59	16,37	23,94
13	20,64			19,18	16,33	25,42
14	22,23			20,76	16,30	26,89
15	23,81	3	16,62	22,35	16,27	28,36
16	25,40			23,94	16,23	29,82
17	26,99			25,53	16,20	31,27
18	28,58			27,11	16,17	32,72
19	30,16			28,70	16,13	34,16
20	31,75			30,29	16,10	35,60
21	33,34			31,88	16,07	37,03
22	34,93			33,46	16,04	38,46
23	36,51			35,05	16,00	39,88
24	38,10			36,64	15,97	41,29
25	39,69			38,23	16,73	46,51
26	41,28			39,81	16,70	48,05
27	42,86			41,40	16,66	49,59
28	44,45			42,99	16,63	51,12
29	46,04			44,58	16,60	52,64
30	47,63			46,16	16,56	54,16
31	49,21			47,75	16,53	55,68
32	50,80			49,34	16,50	57,19
33	52,39	1	47.44	50,93	16,46	58,69
34	53,98	4	17,41	52,51	16,43	60,18
35	55,56			54,10	16,40	61,67
36	57,15			55,69	16,37	63,16
37	58,74			57,28	16,33	64,64
38	60,33	1		58,86	16,30	66,11
39	61,91]		60,45	16,27	67,57
40	63,50]		62,04	16,23	69,03
41	65,09	1		63,63	16,20	70,49
42	66,68			65,21	16,17	71,94

Length	G			9		
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)
43	68,26	4	17,41	66,80	16,13	73,38
44	69,85			68,39	16,10	74,82
45	71,44			69,98	16,07	76,25
46	73,03			71,56	16,04	77,67
47	74,61			73,15	16,00	79,09
48	76,20			74,74	15,97	80,50
49	77,79	5	18,20	76,33	16,73	89,40
50	79,38			77,91	16,70	90,94
51	80,96			79,50	16,66	92,48
52	82,55			81,09	16,63	94,01
53	84,14			82,68	16,60	95,54
54	85,73			84,26	16,56	97,06
55	87,31			85,85	16,53	98,57
56	88,90			87,44	16,50	100,08
57	90,49			89,03	16,46	101,58
58	92,08			90,61	16,43	103,07
59	93,66			92,20	16,40	104,56
60	95,25			93,79	16,37	106,05
61	96,84			95,38	16,33	107,52
62	98,43			96,96	16,30	109,00
63	100,01			98,55	16,27	110,46
64	101,60			100,14	16,23	111,92
65	103,19			101,73	16,20	113,38
66	104,78			103,31	16,17	114,82
67	106,36			104,90	16,13	116,27
68	107,95			106,49	16,10	117,70
69	109,54			108,08	16,07	119,13
70	111,13			109,66	16,04	120,56
71	112,71			111,25	16,00	121,98
72	114,30			112,84	15,97	123,39

Table 24 : Oversize length 2nd Oversize (Continued)

Length	G			10		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
7	11,11			9,65	18,33	21,33
8	12,70			11,24	18,30	23,26
9	14,29			12,83	18,27	25,18
10	15,88			14,41	18,23	27,09
11	17,46			16,00	18,20	28,98
12	19,05			17,59	18,17	30,88
13	20,64			19,18	18,13	32,77
14	22,23			20,76	18,10	34,65
15	23,81			22,35	18,07	36,52
16	25,40	3	18,42	23,94	18,03	38,39
17	26,99	3	10,42	25,53	18,00	40,25
18	28,58			27,11	17,97	42,11
19	30,16			28,70	17,93	43,94
20	31,75			30,29	17,90	45,79
21	33,34			31,88	17,87	47,62
22	34,93			33,46	17,84	49,45
23	36,51			35,05	17,80	51,26
24	38,10			36,64	17,77	53,08
25	39,69			38,23	17,74	54,89
26	41,28			39,81	17,70	56,69
27	42,86			41,40	18,53	63,65
28	44,45			42,99	18,50	65,62
29	46,04			44,58	18,46	67,58
30	47,63			46,16	18,43	69,53
31	49,21			47,75	18,40	71,47
32	50,80			49,34	18,36	73,41
33	52,39			50,93	18,33	75,34
34	53,98			52,51	18,30	77,26
35	55,56			54,10	18,27	79,17
36	57,15	4	10.00	55,69	18,23	81,08
37	58,74	4	19,28	57,28	18,20	82,98
38	60,33			58,86	18,17	84,88
39	61,91			60,45	18,13	86,76
40	63,50			62,04	18,10	88,64
41	65,09			63,63	18,07	90,52
42	66,68			65,21	18,03	92,39
43	68,26			66,80	18,00	94,24
44	69,85			68,39	17,97	96,10
45	71,44			69,98	17,93	97,95
46	73,03	<u></u>		71,56	17,90	99,79

Length	G			10		
code No.)	Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
47	74,61	4	19,28	73,15	17,87	101,62
48	76,20			74,74	17,84	103,45
49	77,79			76,33	17,80	105,27
50	79,38			77,91	17,77	107,09
51	80,96			79,50	17,74	108,89
52	82,55			81,09	17,70	110,69
53	84,14			82,68	18,53	122,57
54	85,73			84,26	18,50	124,53
55	87,31			85,85	18,46	126,48
56	88,90			87,44	18,43	128,43
57	90,49			89,03	18,40	130,38
58	92,08			90,61	18,36	132,32
59	93,66			92,20	18,33	134,24
60	95,25			93,79	18,30	136,17
61	96,84			95,38	18,27	138,09
62	98,43			96,96	18,23	140,00
63	100,01			98,55	18,20	141,89
64	101,60			100,14	18,17	143,79
65	103,19	_	20.44	101,73	18,13	145,68
66	104,78	5	20,14	103,31	18,10	147,57
67	106,36			104,90	18,07	149,43
68	107,95			106,49	18,03	151,30
69	109,54			108,08	18,00	153,17
70	111,13			109,66	17,97	155,03
71	112,71			111,25	17,93	156,86
72	114,30			112,84	17,90	158,71
73	115,89			114,43	17,87	160,55
74	117,48			116,01	17,84	162,38
75	119,06			117,60	17,80	164,19
76	120,65			119,19	17,77	166,01
77	122,24			120,78	17,74	167,82
78	123,83			122,36	17,70	169,62

Table 25 : Oversize length 2nd Oversize (Continued)

Length	G			12		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
8	12,70			11,24	21,92	35,28
9	14,29			12,83	21,88	37,94
10	15,88			14,41	21,85	40,59
11	17,46			16,00	21,82	43,21
12	19,05			17,59	21,78	45,84
13	20,64			19,18	21,75	48,47
14	22,23			20,76	21,72	51,09
15	23,81			22,35	21,68	53,68
16	25,40			23,94	21,65	56,28
17	26,99			25,53	21,62	58,87
18	28,58			27,11	21,58	61,46
19	30,16	3	21,99	28,70	21,55	64,02
20	31,75			30,29	21,52	66,59
21	33,34			31,88	21,49	69,15
22	34,93			33,46	21,45	71,70
23	36,51			35,05	21,42	74,23
24	38,10			36,64	21,39	76,77
25	39,69			38,23	21,35	79,30
26	41,28			39,81	21,32	81,83
27	42,86			41,40	21,29	84,33
28	44,45			42,99	21,25	86,83
29	46,04			44,58	21,22	89,33
30	47,63			46,16	21,19	91,83
31	49,21			47,75	22,15	102,22
32	50,80			49,34	22,12	104,93
33	52,39			50,93	22,08	107,64
34	53,98			52,51	22,05	110,33
35	55,56			54,10	22,02	113,00
36	57,15			55,69	21,98	115,68
37	58,74			57,28	21,95	118,36
38	60,33			58,86	21,92	121,02
39	61,91			60,45	21,88	123,66
40	63,50			62,04	21,85	126,31
41	65,09	4	22,98	63,63	21,82	128,95
42	66,68			65,21	21,78	131,58
43	68,26			66,80	21,75	134,19
44	69,85]		68,39	21,72	136,81
45	71,44			69,98	21,68	139,42
46	73,03			71,56	21,65	142,02
47	74,61			73,15	21,62	144,60
48	76,20			74,74	21,58	147,18
49	77,79			76,33	21,55	149,76
50	79,38			77,91	21,52	152,33
51	80,96			79,50	21,49	154,87

	G	12							
code No.		Group No.	ØD	K2 + 1,01	Ø D'	Mass (g)			
52	82,55			81,09	21,45	157,43			
53	84,14			82,68	21,42	159,97			
54	85,73			84,26	21,39	162,51			
55	87,31			85,85	21,35	165,03			
56	88,90	4	22,98	87,44	21,32	167,55			
57	90,49			89,03	21,29	170,07			
58	92,08			90,61	21,25	172,57			
59	93,66			92,20	21,22	175,06			
60	95,25			93,79	21,19	177,55			
61	96,84			95,38	22,15	195,56			
62	98,43			96,96	22,12	198,27			
63	100,01			98,55	22,08	200,96			
64	101,60			100,14	22,05	203,66			
65	103,19			101,73	22,02	206,34			
66	104,78			103,31	21,98	209,03			
67	106,36			104,90	21,95	211,68			
68	107,95			106,49	21,92	214,35			
69	109,54			108,08	21,88	217,00			
70	111,13			109,66	21,85	219,65			
71	112,71			111,25	21,82	222,27			
72	114,30			112,84	21,78	224,91			
73	115,89			114,43	21,75	227,53			
74	117,48			116,01	21,72	230,15			
75	119,06	5	23,97	117,60	21,68	232,74			
76	120,65	5	23,97	119,19	21,65	235,34			
77	122,24			120,78	21,62	237,94			
78	123,83			122,36	21,58	240,52			
79	125,41			123,95	21,55	243,09			
80	127,00			125,54	21,52	245,66			
81	128,59			127,13	21,49	248,22			
82	130,18			128,71	21,45	250,77			
83	131,76			130,30	21,42	253,30			
84	133,35			131,89	21,39	255,84			
85	134,94			133,48	21,35	258,37			
86	136,53			135,06	21,32	260,89			
87	138,11			136,65	21,29	263,39			
88	139,70			138,24	21,25	265,90			
89	141,29			139,83	21,22	268,40			
90	142,88			141,41	21,19	270,89			

Table 26 : Oversize length 2nd Oversize (Continued)

Length	G			14		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
9	14,29			12,83	25,69	53,19
10	15,88			14,41	25,66	56,83
11	17,46			16,00	25,63	60,44
12	19,05			17,59	25,59	64,07
13	20,64			19,18	25,56	67,69
14	22,23			20,76	25,53	71,29
15	23,81			22,35	25,49	74,87
16	25,40			23,94	25,46	78,46
17	26,99			25,53	25,43	82,04
18	28,58			27,11	25,39	85,61
19	30,16			28,70	25,36	89,15
20	31,75			30,29	25,33	92,70
21	33,34			31,88	25,30	96,24
22	34,93	2	25.70	33,46	25,26	99,77
23	36,51	3	25,79	35,05	25,23	103,28
24	38,10			36,64	25,20	106,79
25	39,69			38,23	25,16	110,30
26	41,28			39,81	25,13	113,79
27	42,86			41,40	25,10	117,26
28	44,45			42,99	25,06	120,74
29	46,04			44,58	25,03	124,21
30	47,63			46,16	25,00	127,67
31	49,21			47,75	24,97	131,10
32	50,80			49,34	24,93	134,54
33	52,39			50,93	24,90	137,97
34	53,98			52,51	24,87	141,40
35	55,56			54,10	24,83	144,79
36	57,15			55,69	24,80	148,20
37	58,74			57,28	25,96	164,91
38	60,33			58,86	25,93	168,63
39	61,91			60,45	25,89	172,32
40	63,50			62,04	25,86	176,02
41	65,09			63,63	25,83	179,71
42	66,68			65,21	25,79	183,40
43	68,26			66,80	25,76	187,05
44	69,85		00.00	68,39	25,73	190,71
45	71,44	4	26,98	69,98	25,69	194,36
46	73,03			71,56	25,66	198,01
47	74,61			73,15	25,63	201,62
48	76,20			74,74	25,59	205,25
49	77,79			76,33	25,56	208,87
50	79,38			77,91	25,53	212,47
51	80,96			79,50	25,49	216,05
52	82,55			81,09	25,46	219,64
53	84,14	4	26,98	82,68	25,43	223,22

Length	G			14		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
54	85,73			84,26	25,39	226,79
55	87,31			85,85	25,36	230,33
56	88,90			87,44	25,33	233,88
57	90,49			89,03	25,30	237,42
58	92,08			90,61	25,26	240,96
59	93,66			92,20	25,23	244,46
60	95,25			93,79	25,20	247,98
61	96,84			95,38	25,16	251,48
62	98,43			96,96	25,13	254,98
63	100,01			98,55	25,10	258,45
64	101,60			100,14	25,06	261,92
65	103,19			101,73	25,03	265,39
66	104,78			103,31	25,00	268,86
67	106,36			104,90	24,97	272,29
68	107,95			106,49	24,93	275,73
69	109,54			108,08	24,90	279,16
70	111,13			109,66	24,87	282,59
71	112,71			111,25	24,83	285,98
72	114,30			112,84	24,80	289,39
73	115,89			114,43	25,96	318,94
74	117,48			116,01	25,93	322,66
75	119,06			117,60	25,89	326,35
76	120,65			119,19	25,86	330,05
77	122,24			120,78	25,83	333,74
78	123,83			122,36	25,79	337,42
79	125,41			123,95	25,76	341,08
80	127,00			125,54	25,73	344,74
81	128,59			127,13	25,69	348,39
82	130,18			128,71	25,66	352,03
83	131,76			130,30	25,63	355,65
84	133,35	5	28,17	131,89	25,59	359,28
85	134,94		,	133,48	25,56	362,90
86	136,53			135,06	25,53	366,50
87	138,11			136,65	25,49	370,08
88	139,70			138,24	25,46	373,68
89	141,29			139,83	25,43	377,25
90	142,88			141,41	25,39	380,82
91	144,46			143,00	25,36	384,38
92	146,05			144,59	25,33	387,93
93	147,64			146,18	25,30	391,47
94	149,23			147,76	25,26	395,00
95	150,81			149,35	25,23	398,52
96	152,40			150,94	25,20	402,03

Table 27 : Oversize length 2nd Oversize (Continued)

Length	G		14					
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)		
97	153,99			152,53	25,16	405,53		
98	155,58			154,11	25,13	409,02		
99	157,16			155,70	25,10	412,51		
100	158,75			157,29	25,06	415,98		
101	160,34			158,88	25,03	419,45		
102	161,93	5	28,17	160,46	25,00	422,91		
103	163,51	5	20,17	162,05	24,97	426,35		
104	165,10			163,64	24,93	429,79		
105	166,69			165,23	24,90	433,22		
106	168,28			166,81	24,87	436,64		
107	169,86			168,40	24,83	440,06		
108	171,45			169,99	24,80	443,46		

Table 28 : Oversize length 2nd Oversize (Continued)

Length	G			16			L	ength	G			16		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)		code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
10	15,88			14,41	29,25	72,44		35	55,56			54,10	28,42	187,01
11	17,46			16,00	29,22	77,12		36	57,15			55,69	28,39	191,47
12	19,05			17,59	29,18	81,83		37	58,74	3	29,39	57,28	28,36	195,92
13	20,64			19,18	29,15	86,53		38	60,33	3	23,33	58,86	28,32	200,35
14	22,23			20,76	29,12	91,21		39	61,91			60,45	28,29	204,75
15	23,81			22,35	29,09	95,86		40	63,50			62,04	28,26	209,16
16	25,40			23,94	29,05	100,52		41	65,09			63,63	29,55	232,08
17	26,99			25,53	29,02	105,18		42	66,68			65,21	29,51	236,89
18	28,58			27,11	28,98	109,82		43	68,26			66,80	29,48	241,66
19	30,16			28,70	28,95	114,42		44	69,85			68,39	29,45	246,45
20	31,75			30,29	28,92	119,05		45	71,44			69,98	29,42	251,23
21	33,34			31,88	28,88	123,66		46	73,03			71,56	29,38	256,00
22	34,93	3	29,39	33,46	28,85	128,26		47	74,61			73,15	29,35	260,73
23	36,51			35,05	28,82	132,82		48	76,20			74,74	29,32	265,48
24	38,10			36,64	28,79	137,40		49	77,79			76,33	29,28	270,22
25	39,69			38,23	28,75	141,97		50	79,38	4	30,71	77,91	29,25	274,95
26	41,28			39,81	28,72	146,53		51	80,96			79,50	29,22	279,64
27	42,86			41,40	28,69	151,05		52	82,55			81,09	29,18	284,34
28	44,45			42,99	28,65	155,59		53	84,14			82,68	29,15	289,04
29	46,04			44,58	28,62	160,12		54	85,73			84,26	29,12	293,73
30	47,63			46,16	28,59	164,64		55	87,31			85,85	29,09	298,37
31	49,21			47,75	28,55	169,12		56	88,90			87,44	29,05	303,04
32	50,80			49,34	28,52	173,61		57	90,49			89,03	29,02	307,69
33	52,39			50,93	28,49	178,10		58	92,08			90,61	28,98	312,33
34	53,98			52,51	28,46	182,58		59	93,66			92,20	28,95	316,94

Table 29 : Oversize length 2nd Oversize (Concluded)

Length	G			16		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
60	95,25			93,79	28,92	321,56
61	96,84			95,38	28,88	326,17
62	98,43			96,96	28,85	330,77
63	100,01			98,55	28,82	335,33
64	101,60			100,14	28,79	339,91
65	103,19			101,73	28,75	344,48
66	104,78			103,31	28,72	349,04
67	106,36			104,90	28,69	353,56
68	107,95			106,49	28,65	358,10
69	109,54			108,08	28,62	362,63
70	111,13	4	30,71	109,66	28,59	367,15
71	112,71			111,25	28,55	371,63
72	114,30			112,84	28,52	376,12
73	115,89			114,43	28,49	380,61
74	117,48			116,01	28,46	385,09
75	119,06			117,60	28,42	389,53
76	120,65			119,19	28,39	393,98
77	122,24			120,78	28,36	398,43
78	123,83			122,36	28,32	402,86
79	125,41			123,95	28,29	407,27
80	127,00			125,54	28,26	411,68
81	128,59			127,13	29,55	452,65
82	130,18			128,71	29,51	457,45
83	131,76			130,30	29,48	462,23
84	133,35			131,89	29,45	467,03
85	134,94			133,48	29,42	471,81
86	136,53	5	22.02	135,06	29,38	476,57
87	138,11	5	32,03	136,65	29,35	481,30
88	139,70			138,24	29,32	486,06
89	141,29			139,83	29,28	490,79
90	142,88			141,41	29,25	495,52
91	144,46			143,00	29,22	500,23
92	146,05			144,59	29,18	504,93

Length	G			16		
code No.		Group No.	Ø D	K2 + 1,01	Ø D'	Mass (g)
93	147,64	5	32,03	146,18	29,15	509,62
94	149,23			147,76	29,12	514,30
95	150,81			149,35	29,09	518,97
96	152,40			150,94	29,05	523,63
97	153,99			152,53	29,02	528,27
98	155,58			154,11	28,98	532,91
99	157,16			155,70	28,95	537,54
100	158,75			157,29	28,92	542,15
101	160,34			158,88	28,88	546,76
102	161,93			160,46	28,85	551,35
103	163,51			162,05	28,82	555,94
104	165,10			163,64	28,79	560,51
105	166,69			165,23	28,75	565,08
106	168,28			166,81	28,72	569,63
107	169,86			168,40	28,69	574,17
108	171,45			169,99	28,65	578,71
109	173,04			171,58	28,62	583,23
110	174,63			173,16	28,59	587,74
111	176,21			174,75	28,55	592,24
112	177,80			176,34	28,52	596,73
113	179,39			177,93	28,49	601,21
114	180,98			179,51	28,46	605,68
115	182,56			181,10	28,42	610,14
116	184,15			182,69	28,39	614,59
117	185,74			184,28	28,36	619,03
118	187,33			185,86	28,32	623,46
119	188,91			187,45	28,29	627,88
120	190,50			189,04	28,26	632,29

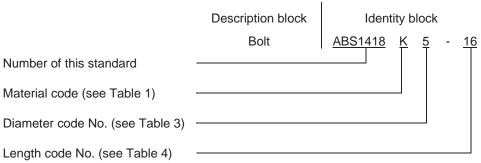
4 Mass Calculation

For Inconel and Alloy Steel, multiply the value of the titanium mass by the material density ratio Mass.(Titanium mass values have been given in dimension tables):

Mass (Inconel 718) = Mass (Titanium) x 1.874 (Mass values in grammes) Mass (Alloy Steel) = Mass (Titanium) x 1.783 (Mass values in grammes)

5 Designation

EXAMPLE:



6 Marking

Parts shall be marked as per EN 2424, style B on the head. The length code No. shall be marked at the bottom of the thread.

Marking shall be recessed with max. depth of 0,25 mm.

7 Technical specification

EN 6116.

RECORD OF REVISIONS

Issue	Clause modified	Description of modification
1		New Standard.
04/03		
2		Material Inconel added.
08/05		Lubrication for alloy steel modified.
		Length code Nos 37 to 48 added in tables 4, 6 and 7.
		"Inconel 718 as per AMS 5662" changed to "AMS 5962" and bolt
		identification added for material code L in table 1.
		Min. tensile strength and max. fatigue load added for dash Nos 12,14 and 16
		(Inconel) in table 2.
		Minimum double shear strength modified for dash Nos 12, 14 and 16 (Titanium
		alloy) in table 2.
		Group No. 4 added in table 3 for dia. code No. 6.
		Group No. 5 added in table 5 for dia. code No. 6X.
		Group No. 6 added in table 5 for dia. code No. 6Y.
		Code V added
		Mechanical characteristics modified according to ASNA2012 values
3	Section 3	Modification of Alloy steel, Titanium and Inconel mechanical properties in table 2
08/08	Figure 1	Addition of a drill centre dimple on the fastener head in figure 1
		detail A modified in accordance with oversize configurations
		Addition of note 2 and note 3.
	Table 3	Diameter 9 dimension C corrected and Diameter 16 dimension C corrected
		C values and tolerances rounded to the nearest value
		Mass added for all dia code : first and second oversize, mass calculation for other materials
	Section 4	Mass calculation added
	Table 5	1 st and 2 nd oversize dimension B ref added.
	Section 6	Marking editorially amended.