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HEXAGON SLOTTED AND CASTLE NUTS OF ACCURACY CLASS A. CONSTRUCTION AND DIMENSION. GOST 5933-73.

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Date	Compiled by	SPECIFICATION No.
	Dinesh 01/03/86.	GOST 5933-73.
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STATE STANDARD OF U S S R

HEXAGON SLOTTED AND CASTLE NUTS OF ACCURACY CLASS A. CONSTRUCTION AND DIMENSIONZ

GOST 5933-73

The present standarc pertains to slotted and castle hexagon nuts of ~~cless of~~ accuracy class A with diameters of thread from 6 to 48 mm.

The standard completely complies with CT C∋ B 2663-80.

1. The construction and dimensions of nuts should comply with the readings in drawing and in table.

Dimension, ~~in~~ mm

nominal dia of thread d		6	8	10	12	(14)	16
Pitch of thread	Coarse	1	1,25	1,5	1,75	2	2
	Fine	–	1	1,25	1,25	1,5	1,5
width across flats ~~Dimension "for Spanner"~~ ; (~~tolerance~~ limit deviations as per h13)		10	13	17	19	22	24
height h (~~tolerance~~ limit deviations as per h 14)		6	7	8	10	11	12
Diameter of circumscribe circle, e, minimum		11,0	14,4	18,9	21,1	24,5	26,8
Number of slots		6					
Width of slot n (limit deviation ~~tolerance~~ as per H14)		2	2,5	2,8	3,5		4,5
Distance from supporting surface to base of slot and castle m (~~tolerance~~ limit deviation h 14)		3,5	4	5	6	7	

Diameter of Castle D (limit deviation tolerance h 14)		-			17	19	22
diameter of chamfer dia	Minimum	6	8	10	12	14	16
	Maximum	6,75	8,75	10,8	13,0	15,1	17,3
Tolerance of symmetry of slots relative to axis of thread in diametrical expression 21 T 14		0,60	0,72		0,86		
Tolerance of symmetric width across flats dimension "for spanner" relative to hole in diametrical expression 21T14		72	0,86		1,04		
Dimension of cotter pin (recommended) as per GOST 397-79	Design 1	1,6X16	2X20	2,5X25	3,2X32		4X36
	Design 2	-	-	-	3,2x25		4X32

Dimension, in mm

Nominal dia of thread d,		(18)	20	(22)	24	(27)	30
Pitch of thread	Coarse	2,5	2,5	2,5	3	3	3,5
	Fine	1,5	1,5	1,5	2	2	2
Dimension "for spanner" (width across flats; tolerance as per h 13)		27	30	32	36	41	46
height h (tolerance as per h 14)		13		15		17	18
Diameter of circumscribe circle, e, minimum		30,2	33,6	35,8	40,3	45,9	51,6
Number of slots		6					
Width of slot n (tolerance as per H 14)		4,5		5,5			7
Distance from supporting surface to base of slot and castle, m (tolerance h 14)		8		9		11	
Diameter of castle D (tolerance h 14)		25	28	30	34	38	42
diameter of chamfer dia	Minimum	18	20	22	24	27	30
	Maximum	18,5	21,6	22,7	25,9	29,1	32,4
Tolerance of symmetry of slots in relation to axis of thread in diametrical expression 21 T 14		0,86		1,04			
Tolerance of symmetric dimension "for spanner" in relation to hole in diametrical expression 21 T 14		1,04		1,24			
Dimension of Cotter pin (recommended) as per GOST 397-79	Design 1	4X40		5X45		5X 50	6,3X 63
	Design 2	4X36		5X40		5X 45	6,3X 50

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Dimension in mm

Nominal dia of thread d		(33)	36	(39)	42	48
Pitch of thread	Coarse	3,5	4	4	4,5	5
	Fine	2	3	3	3	3
Width across flats S (tolerance as per h 13) limit deviation		50	55	60	65	75
Height h (tolerance as per h 14) limit deviation		20	20	22	23	25
Diameter of circumscribed circles, minimum		56,1	61,7	67,4	73,0	84,3
Number of slots		6			6	
Width of slot n (tolerance as per H 13) limit deviation		7			9	
Distance from supporting surface to base of slot and castel m (tolerance h 14) limit deviation		13			14	16
Diameter of castle D (tolerance h 14) limit deviation		46	50	55	58	65
Diameter of chamfer dia	Minimum	33	36	39	42	48
	Maximum	33,6	38,9	42,2	45,4	52
Tolerance of symmetry of slots in relation to axis of thread in diametrical expression 21 T 14				1,24		
Tolerance of symmetry with across flats dimension for spanner in relation to hole in diametrical expression 21 T 9.		1,24			1,48	
Dimension of Cotter pin (recommended) as per GOST 397-79	Design 1	6,3X 63	6,3X 71	6,3X 71	8X80	8X90
	Design 2	6,3X 50	6,3X 63	6,3X 63	8X71	8X80

NOTE: 1. Dimensions in brackets are not recommended.

2. As per agreement between manufacturer and consumer the nut with nominal diameter of thread from 36 to 48mm with pitch of thread 2mm may be manufactured.

Example of conventional designation of nut of design 1 with diameter of thread d = 12 mm, with coarse pitch of thread, with tolerance zone 7H, class of accuracy 5, without coating

Nut M 12 - 7 H.5 GOST 5933 - 73

Same also of design 2, with fine pitch of thread with tolerance zone 6 H, with coating 01 thickness 9 μm

Nut 2 M 12 X 1.25 - 6H.5.019 GOST 5933 - 73

2. The thread as per GOST24705 - 81, zone of tolerance 7H or 6H as per GOST 16093-81.
3. The chamfer may be formed from slot side or from castle side.
   a) The form of bottom of slot can be plain, rounded off or with chamfer.
4. Technical requirements as per GOST 1759-70
5. Theoretical weight of nuts is shown in reference appendix.

Weight of steel nuts with coarse pitch of thread

Nominal dia of thread d, mm	Theoretical weight of 1000 nuts, KG approxi.		Nominal dia of thread d, mm	Theoretical weight of 1000 nuts, KG approxi.	
	design 1	design 2		design 1	design 2
1	2	3	4	5	6
6	2.473	-	14	22.176	18.930
8	4.789	-	16	26.078	22.490
10	10.119	-	18	37.309	32.050
12	14.593	12.560	20	46.315	40.960

1	2	3	4		5
22	96.998	90.05(	36	24	0.400
24	76.349	67.81(	39	3	1.320
27	116.110	103.26(	42	31	4.160
30	152.560	132.57(	48	570.	6.140
33	200.715	175.52[illegible]			

For determining the weight of nuts made from [illegible]terials the value of weight, shown in table is [illegible] by the coefficients:

0.936 - for aluminium alloy

1.080 - for brass

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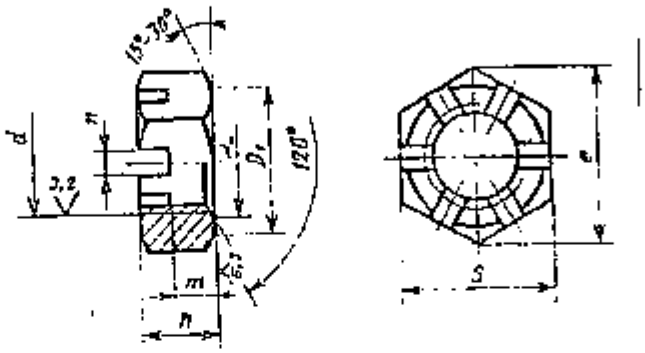
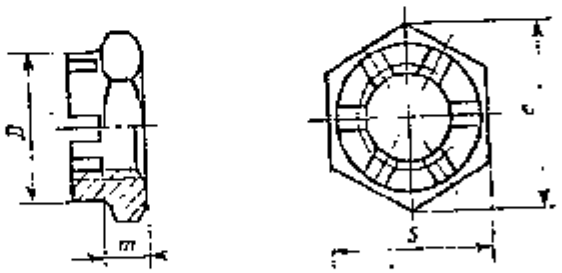
DESIGN-1 *Исполнение 1*



DESIGN-2 *Исполнение 2*



$D_1 = (0,90...0,95)S$