

TRANSLATED AND
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Group Г 32 (Г 32)

USSR STATE STANDARD

Countersunk Screws

GOST 17475 - 80

Construction and dimensions

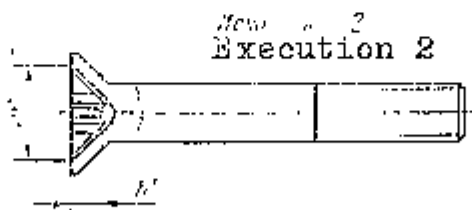
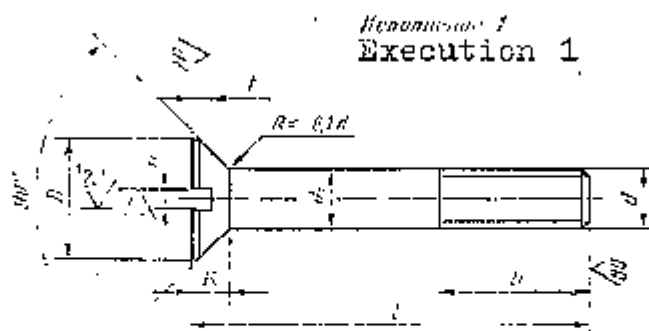
This supersedes

Valid upto 01.01.1992

GOST 17475 - 72

1. The present standard relates to countersunk screws of degree of accuracy A (increased) with thread diameter from M1 to M20 and to countersunk screws of degree of accuracy B (normal) with thread diameter from M2.5 to M20.

2. The construction and dimensions of screws must conform to those shown in the drawings and in Table 1 and 2.



* Reference dimensions.

Table 1
Таблица 1

mm

Nominal thread diameter, d		1	1,2	1,4	1,6	2	2,5	3	3,5	4	5	6	8	10	12	14	15	18	20				
Thread pitch P,	coarse	0,25	0,25	0,3	0,35	0,4	0,45	0,5	0,5	0,7	0,8	1	1,25	1,5	1,75	2	2	2,5	2,5				
	fine	—	—	—	—	—	—	—	—	—	—	—	1	1,25	1,25	1,5	1,5	1,5	1,5				
Nominal diameter, D		1,9	2,3	2,6	3,0	3,8	4,7	5,6	6,5	7,4	9,2	11,0	14,5	18,0	21,5	25	28,5	32,5	36,0				
Lim. dev. h14		- 0,25					- 0,30					- 0,36					- 0,52					- 0,62	
Height of head K max.		0,6	0,72	0,84	0,96	1,2	1,5	1,65	1,93	2,2	2,5	3	4	5	6	7	8	9	10				
Width of straight slot h	min	0,31	0,36	0,36	0,46	0,56	0,66	0,86	0,96	1,06	1,26	1,55	2,06	2,56	3,06	3,93	4,07	4,07	5,07				
	max	0,45	0,50	0,50	0,60	0,70	0,83	1,00	1,00	1,20	1,54	1,91	2,31	2,81	3,31	3,31	4,37	4,37	5,37				
Depth of straight slot t	min	0,2	0,24	0,28	0,32	0,4	0,5	0,6	0,7	0,8	1,0	1,2	1,6	2,0	2,4	2,8	3,2	3,6	4,0				
	max	0,3	0,35	0,45	0,5	0,6	0,73	0,85	1,0	1,1	1,35	1,6	2,1	2,6	3,0	3,5	4,0	4,5	5,0				
Cross slot No.		—	—	—	—	0	1	1	2	2	3	3	4	4	4	—	—	—	—				
Cross slot diameter, m		—	—	—	—	2	2,7	2,8	4,0	4,3	4,6	6,5	7,5	9,7	10,7	—	—	—	—				
Cross slot depth, h max.		—	—	—	—	1,1	1,4	1,5	1,7	2,0	2,3	2,7	3,7	4,6	5,5	—	—	—	—				
Depth to which gauge passes into cross slot,	max	—	—	—	—	1,2	1,55	1,7	2,0	2,3	2,6	3,2	4,3	5,4	6,1	—	—	—	—				
	min	—	—	—	—	0,9	1,25	1,4	1,6	1,8	2,1	2,3	3,8	4,9	5,9	—	—	—	—				
Tolerance in run out in the given direction	A	0,28					0,36	0,36	0,41	0,54	0,54	0,54	0,66	0,66	0,66	0,66	0,66	0,66	0,78				
	B	—					0,00	0,00	0,72	0,72	0,72	0,86	0,86	0,86	1,01	1,01	1,01	1,01	1,24				
Tolerance in symmetry of slot with respect to body, in diameter expression	A	0,28					0,28	0,28	0,28	0,28	0,28	0,28	0,34	0,34	0,34	0,54	0,54	0,54	0,62				
	B	—					0,50	0,50	0,50	0,50	0,50	0,50	0,72	0,72	0,72	0,86	0,86	0,86	1,01				

Стр. 4 ГОСТ 17475-80

Threaded length, b for normal
thread diameter, d .Table 2
Таблица 2

мм мм

Length of
the screw l

Lim. dev.

Nom.
Норм.

Degree of accuracy

Длина винта l			Длина резьбы b при нормальном диаметре резьбы d (мм) (символ "X" ставится там, где резьба не может быть сделана на всей длине винта)																			
ев.	Пред. отв.		1	1,2	1,4	1,6	2	2,5	3	3,5	4	5	6	8	10	12	14	16	18	20		
	1,5	1,6																				
Норм. точности.	Степень точности																					
уровня	A	B																				
3	$\pm 0,20$	$\pm 0,30$	X	X	X	X	X															
3,5			X	X	X	X	X	X														
4			X	X	X	X	X	X	X													
5	$\pm 0,24$	$\pm 0,35$	X	X	X	X	X	X	X													
6			X	X	X	X	X	X	X													
(7)				X	X	X	X	X	X	X												
8				X	X	X	X	X	X	X	X											
9	$\pm 0,29$	$\pm 0,43$		X	X	X	X	X	X	X	X	X										
10				X	X	X	X	X	X	X	X	X	X									
11				X	X	X	X	X	X	X	X	X	X	X								
12				X	X	X	X	X	X	X	X	X	X	X	X							
(13)	$\pm 0,35$	$\pm 0,55$		X	X	X	X	X	X	X	X	X	X	X	X	X						
14				X	X	X	X	X	X	X	X	X	X	X	X	X	X					
16				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
(18)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
20				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
(22)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
25	$\pm 0,49$	$\pm 0,65$		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
(28)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
30				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
(32)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
35				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
(38)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
40				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
(42)	$\pm 0,50$	$\pm 0,80$		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
45				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
(48)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
50				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
55				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
60				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
65	$\pm 0,60$	$\pm 0,95$		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
70				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
75				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
80				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
(85)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
90				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
(95)	$\pm 0,70$	$\pm 1,10$		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
100				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
110				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
120				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

Примечание. Длины винтов, заключенные в скобки, применять не рекомендуется.

Note: Screw lengths given in brackets are not recommended to be used.

The symbol "X" denotes threading over the full length of the body.

EXAMPLE OF CONVENTIONAL DESIGNATION

1. Counter sunk screw, of degree of accuracy A, execution 1, with thread diameter $d=8$ mm, with coarse thread pitch, with tolerance zone 6 g for the thread, length $l = 50$ mm, class of strength 4.8, without plating:

Screw A1.M8 - 6g x 50.48 GOST 17475-80.

2. Countersunk screw, degree of accuracy B, execution 2, with fine thread pitch, ^{with tolerance zone 6g for the thread} with 6 microns thick zinc plating applied by cathode reduction process and chromating.

Screw B2.M8 x 1 - 8g x 50.48.016 GOST 17475-80.

3. Diameter of the unthreaded portion of the body d_1 must be within the limits of the major diameter and pitch diameter of the thread.

4. Screws of length not shown in the Table may be manufactured by mutual consent.

5. Tolerance zone for the thread, 6g or 8g is as defined in GOST 16093-70.

6. Limit deviation in the taper angle of the head is $+2'$ for degree of accuracy A and $+3'$ for degree of accuracy B.

7. Cross slot is defined in GOST 10753-64.

8. Technical requirements are defined in GOST 1759-70.

9. Reference annexure 1 lists theoretical weight of screws.

10. If it is necessary to provide interchangeability with articles designed before 01.01.1980, screws may be manufactured with the tolerances specified in annexure 2, by mutual consent.

THEORETICAL WEIGHT OF SCREWS

Weight of 1000 Nos. coarse pitch screws, kg, for nominal thread diameter d, mm

Length of
screw l,
mm

	1	1.2	1.4	1.6	2	2.5	3	3.5	4	5	6	8	10	12	14	16	18	20
3	1.03	0.028	0.039	0.052	0.091	0.171	0.254	0.335	0.416	0.497	0.578	0.659	0.740	0.821	0.902	0.983	1.064	1.145
3.5	0.030	0.031	0.043	0.058	0.100	0.186	0.276	0.365	0.454	0.543	0.632	0.721	0.810	0.899	0.988	1.077	1.166	1.255
4	0.022	0.034	0.048	0.063	0.109	0.186	0.276	0.365	0.454	0.543	0.632	0.721	0.810	0.899	0.988	1.077	1.166	1.255
5	0.026	0.041	0.057	0.075	0.127	0.215	0.303	0.391	0.479	0.567	0.655	0.743	0.831	0.919	1.007	1.095	1.183	1.271
6	—	0.054	0.075	0.097	0.163	0.274	0.385	0.496	0.607	0.718	0.829	0.940	1.051	1.162	1.273	1.384	1.495	1.606
7	—	—	0.084	0.105	0.181	0.303	0.425	0.547	0.669	0.791	0.913	1.035	1.157	1.279	1.401	1.523	1.645	1.767
8	—	—	0.093	0.120	0.199	0.333	0.467	0.601	0.735	0.869	1.003	1.137	1.271	1.405	1.539	1.673	1.807	1.941
10	—	—	0.102	0.131	0.217	0.362	0.507	0.652	0.797	0.942	1.087	1.232	1.377	1.522	1.667	1.812	1.957	2.102
11	—	—	0.111	0.142	0.235	0.391	0.547	0.703	0.859	1.015	1.171	1.327	1.483	1.639	1.795	1.951	2.107	2.263
12	—	—	—	0.153	0.253	0.421	0.590	0.758	0.927	1.095	1.263	1.431	1.599	1.767	1.935	2.103	2.271	2.439
13	—	—	—	0.165	0.271	0.450	0.629	0.808	0.987	1.166	1.345	1.524	1.703	1.882	2.061	2.240	2.419	2.598
14	—	—	—	0.176	0.289	0.479	0.668	0.857	1.046	1.235	1.424	1.613	1.802	1.991	2.180	2.369	2.558	2.747
16	—	—	—	—	0.325	0.538	0.751	0.964	1.177	1.390	1.603	1.816	2.029	2.242	2.455	2.668	2.881	3.094
18	—	—	—	—	0.361	0.585	0.809	1.033	1.257	1.481	1.705	1.929	2.153	2.377	2.601	2.825	3.049	3.273
20	—	—	—	—	—	0.711	1.056	1.401	1.746	2.091	2.436	2.781	3.126	3.471	3.816	4.161	4.506	4.851
22	—	—	—	—	—	0.802	—	—	—	—	—	—	—	—	—	—	—	—
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
38	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
110	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
120	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Note: The weights shown in the table must be multiplied by a factor of 0.356 to determine the weight of aluminium alloy screws and by a factor of 1.08 to determine the weight of brass screws.

ANNEXURE 2

For reference

TOLERANCES FOR COUNTER SUNK SCREWS IN THE ESDP SEV AND
OST SYSTEMS

Tolerance zones	
In the ESDP SEV system (ЕСДП СЭВ)	In the OST system (ОСТ)
h14	B ₇
js16	CM ₉