GENERAL DIMENSIONAL TOLERANCES FOR PARTS FORMED BY PRESS WORKING FROM SHEET METAL AND SHEAR FROM METAL PLATES

Excerpts from JIS B 0408 (1991) JIS B 0410 (1991)

1. General dimension tolerance for parts formed by press working from sheet metal JIS B 0408-1991-

Table 1. General dimension tolerances of punching Units: mm

Standard dimension	Grade					
Statiuaru utilietistoti	Grade A	Grade B	Grade C			
No more than 6	±0.05	±0.1	±0.3			
More than 6 No more than 30	±0.1	±0.2	±0.5			
More than 30 No more than 120	±0.15	±0.3	±0.8			
More than 120 No more than 400	±0.2	±0.5	±1.2			
More than 400 No more than 1000	±0.3	±0.8	±2			
More than 1000 No more than 2000	±0.5	±1.2	±3			

Note Grade A, B, and C are equivalent to tolerance grades f, m, and c in JIS B 0405.

Table 2. General dimensional tolerances of bending and drawing Units: mm

Standard dimension	Grade					
Standard dimension	Grade A	Grade B	Grade C			
No more than 6	±0.1	±0.3	±0.5			
More than 6 No more than 30	±0.2	±0.5	±1			
More than 30 No more than 120	±0.3	±0.8	±1.5			
More than 120 No more than 400	±0.5	±1.2	±2.5			
More than 400 No more than 1000	±0.8	±2	±4			
More than 1000 No more than 2000	±1.2	±3	±6			

Note Grade A, B, and C are equivalent to tolerance grades f, m, and c in JIS B 0405.

2. General tolerances for parts formed by shear from metal plates JIS B 0410-1991-

Table 1. General dimensional tolerances of cut widths

Units: mm

	Material thickness (t) class							
0111-1	t≦	1.6	1.6 <t≤3< td=""><td colspan="2">3<t≦6< td=""><td colspan="2">6<t≦12< td=""></t≦12<></td></t≦6<></td></t≤3<>		3 <t≦6< td=""><td colspan="2">6<t≦12< td=""></t≦12<></td></t≦6<>		6 <t≦12< td=""></t≦12<>	
Standard dimension	Grade					·		
	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B
No more than 30	±0.1	±0.3	_	_	_	_	_	_
More than 30 No more than 120	±0.2	±0.5	±0.3	±0.5	±0.8	±1.2	_	±1.5
More than 120 No more than 400	±0.3	±0.8	±0.4	±0.8	±1	±1.5	_	±2
More than 400 No more than 1000	±0.5	±1	±0.5	±1.2	±1.5	±2	_	±2.5
More than 1000 No more than 2000	±0.8	±1.5	±0.8	±2	±2	±3	_	±3
More than 2000 No more than 4000	±1.2	±2	±1.2	±2.5	±3	±4	_	±4

Table 2. General tolerances of straightness

Units: mm

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	Material thickness (t) class								
	t≦1.6		1.6 <t≤3< td=""><td colspan="2">3<t≦6< td=""><td colspan="2">6<t≦12< td=""></t≦12<></td></t≦6<></td></t≤3<>		3 <t≦6< td=""><td colspan="2">6<t≦12< td=""></t≦12<></td></t≦6<>		6 <t≦12< td=""></t≦12<>		
Nominal dimension of cut length		Grade							
	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B	
No more than 30	0.1	0.2	_	_	_	_	_	_	
More than 30 No more than 120	0.2	0.3	0.2	0.3	0.5	0.8	_	1.5	
More than 120 No more than 400	0.3	0.5	0.3	0.5	0.8	1.5	_	2	
More than 400 No more than 1000	0.5	0.8	0.5	1	1.5	2	_	3	
More than 1000 No more than 2000	0.8	1.2	0.8	1.5	2	3	_	4	
More than 2000 No more than 4000	1.2	2	1.2	2.5	3	5	_	6	

Table 3. General tolerances for perpendicularity

Units: mm

	Material thickness (t) class									
Nominal length of short	t ≦ 3		3 <t≦6< td=""><td colspan="2">6<t≦12< td=""></t≦12<></td></t≦6<>		6 <t≦12< td=""></t≦12<>					
side	Grade									
	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B				
No more than 30	_	_	_	_	_	_				
More than 30 No more than 120	0.3	0.5	0.5	0.8	_	1.5				
More than 120 No more than 400	0.8	1.2	1	1.5	_	2				
More than 400 No more than 1000	1.5	3	2	3	_	3				
More than 1000 No more than 2000	3	6	4	6	_	6				
More than 2000 No more than 4000	6	10	6	10	_	10				