

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

Excerpt from JIS B 0408/0410(1991)

## 1. General dimensional tolerances for parts formed by press working from sheet metal

JIS B 0408 —1991

Table 1. General dimensional tolerance of blanking Unit : mm

Basic size step	Grades		
	Grade A	Grade B	Grade C
6 or less	±0.05	±0.1	±0.3
Over 6 to 30 incl.	±0.1	±0.2	±0.5
Over 30 to 120 incl.	±0.15	±0.3	±0.8
Over 120 to 400 incl.	±0.2	±0.5	±1.2
Over 400 to 1000 incl.	±0.3	±0.8	±2
Over 1000 to 2000 incl.	±0.5	±1.2	±3

Note : Grade A, B and C are equal to tolerance grade f, m and c of JIS B 0405 respectively.

Table 2. adimensional tolerance of bending and drawing Unit : mm

Basic size step	Grades		
	Grade A	Grade B	Grade C
6 or less	±0.1	±0.3	±0.5
Over 6 to 30 incl.	±0.2	±0.5	±1
Over 30 to 120 incl.	±0.3	±0.8	±1.5
Over 120 to 400 incl.	±0.5	±1.2	±2.5
Over 400 to 1000 incl.	±0.8	±2	±4
Over 1000 to 2000 incl.	±1.2	±3	±6

Note : Grade A, B and C are equal to tolerance grade m, c and v of JIS B 0405 respectively.

## 2. General tolerances for parts formed by shear from metal plates

JIS B 0410 —1991

Table 1. General dimaensional tolerance of cut width Unit : mm

Basic size step	Board thickness (t)							
	$t \leq 1.6$		$1.6 < t \leq 3$		$3 < t \leq 6$		$6 < t \leq 12$	
	Grades							
	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B
30 or less	±0.1	±0.3	—	—	—	—	—	—
Over 30 to 120 incl.	±0.2	±0.5	±0.3	±0.5	±0.8	±1.2	—	±1.5
Over 120 to 400 incl.	±0.3	±0.8	±0.4	±0.8	±1	±1.5	—	±2
Over 400 to 1000 incl.	±0.5	±1	±0.5	±1.2	±1.5	±2	—	±2.5
Over 1000 to 2000 incl.	±0.8	±1.5	±0.8	±2	±2	±3	—	±3
Over 2000 to 4000 incl.	±1.2	±2	±1.2	±2.5	±3	±4	—	±4

Table 2. General tolerance of straightness Unit : mm

Nominal length on cut dimension	Board thickness (t)							
	$t \leq 1.6$		$1.6 < t \leq 3$		$3 < t \leq 6$		$6 < t \leq 12$	
	Grades							
	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B
30 or less	0.1	0.2	—	—	—	—	—	—
Over 30 to 120 incl.	0.2	0.3	0.2	0.3	0.5	0.8	—	1.5
Over 120 to 400 incl.	0.3	0.5	0.3	0.5	0.8	1.5	—	2
Over 400 to 1000 incl.	0.5	0.8	0.5	1	1.5	2	—	3
Over 1000 to 2000 incl.	0.8	1.2	0.8	1.5	2	3	—	4
Over 2000 to 4000 incl.	1.2	2	1.2	2.5	3	5	—	6

Table 3. General tolerance of perpendicularity Unit : mm

Nominal length on shorter side	Board thickness (t)					
	$t \leq 3$		$3 < t \leq 6$		$6 < t \leq 12$	
	Grades					
	Grade A	Grade B	Grade A	Grade B	Grade A	Grade B
30 or less	—	—	—	—	—	—
Over 30 to 120 incl.	0.3	0.5	0.5	0.8	—	1.5
Over 120 to 400 incl.	0.8	1.2	1	1.5	—	2
Over 400 to 1000 incl.	1.5	3	2	3	—	3
Over 1000 to 2000 incl.	3	6	4	6	—	6
Over 2000 to 4000 incl.	6	10	6	10	—	10