

General Tolerances

Excerpt from JIS B 0405:1991 / JIS B 0419:1991

Allowance for the length dimension excluding the chamfering portion

Unit: mm

Tolerance class		Class of basic dimension(mm)							
Symbol	Explanation	0.5 or more*	More than 3 and 6 or less	More than 6 and 30 or less	More than 30 and 120 or less	More than 120 and 400 or less	More than 400 and 1000 or less	More than 1000 and 2000 or less	More than 2000 and 4000 or less
		Allowance							
f	Fine	±0.05	±0.05	±0.1	±0.15	±0.2	±0.3	±0.5	—
m	Middle class	±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2
c	Coarse	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3	±4
v	Very coarse	—	±0.5	±1	±1.5	±2.5	±4	±6	±8

* For the basic dimension less than 0.5mm, the allowance is indicated individually just after the basic dimension.

Allowance for the length dimension of chamfering portion (dimension of corner's roundness and chamfering at corner)

Unit: mm

Tolerance class		Class of basic dimension(mm)		
Symbol	Explanation	0.5 or more*	More than 3 and 6 or less	More than 6
		Allowance		
f	Fine	±0.2	±0.5	±1
m	Middle class	±0.2	±0.5	±1
c	Coarse	±0.4	±1	±2
v	Very coarse	±0.4	±1	±2

* For the basic dimension less than 0.5 mm, the allowance is indicated individually just after the basic dimension.

Allowance for angular dimension

Tolerance class		Class of length(mm) of shorter side of the object angle				
Symbol	Explanation	10 or less	More than 10 and 50 or less	More than 50 and 120 or less	More than 120 and 400 or less	More than 400
		Allowance				
f	Fine	±1°	±30'	±20'	±10'	±5'
m	Middle class	±1°	±30'	±20'	±10'	±5'
c	Coarse	±1°30'	±1°	±30'	±15'	±10'
v	Very coarse	±3°	±2°	±1°	±30'	±20'

General tolerance for squareness

Unit: mm

Tolerance class	Class of nominal length of shorter side			
	10 or less	More than 10 and 300 or less	More than 300 and 1000 or less	More than 1000 and 3000 or less
	Squareness tolerance			
H	0.2	0.3	0.4	0.5
K	0.4	0.6	0.8	1
L	0.6	1	1.5	2

General tolerance for radial run-out

Unit: mm

Tolerance class	Radial run-out tolerance
H	0.1
K	0.2
L	0.5

General tolerance for straightness and flatness

Unit: mm

Tolerance class	Class of nominal length					
	10 or less	More than 10 and 30 or less	More than 30 and 100 or less	More than 100 and 300 or less	More than 300 and 1000 or less	More than 1000 and 3000 or less
	Straightness tolerance and flatness tolerance					
H	0.02	0.05	0.1	0.2	0.3	0.4
K	0.05	0.1	0.2	0.4	0.6	0.8
L	0.1	0.2	0.4	0.8	1.2	1.6