Copper Plates

Tough Pitch & Oxygen-Free

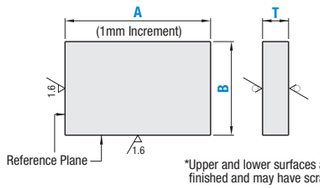
4-Surface Milling (Rolled)

Copper Plates – Tough Pitch & Oxygen-Free

RoHS 10

Part Number	Material
CTA	Tough Pitch Copper JIS H3100 C1100P
CJA	Oxygen Free Copper JIS H3100 C1020P

6.3 (1.6)



ⓘ A≥B

*Upper and lower surfaces are not finished and may have scratches.

Part Number Example

Part Number	-	A	-	B	-	T
CTA	-	200	-	150	-	10

Precision Standards

	Max. Value
Flatness (per 1,000 mm)	2 mm
Perpendicularity of Datum Plane	0.015 per 100 mm
Circumference Chamfering	C0.3 or less

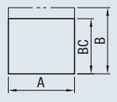
Dimension Tolerance		100 mm or Less			101 mm or More		
	A, B	±0.2			±0.3		
	T	T5	T6, 8	T10, 12	T15–20	T25	T30
		±0.18	±0.23	±0.28	±0.35	±0.55	±0.66

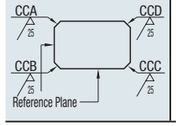
6-Surface Milled

Type	A 1mm Unit	T / B	5	6	8	10	12	15	20	25	30	35	40
CTA CJA	25–250	25	•	•	•	•	•	•	•	•	•	•	•
	40–300	40	•	•	•	•	•	•	•	•	•	•	•
	60–300	60	•	•	•	•	•	•	•	•	•	•	•
	80–300	80	•	•	•	•	•	•	•	•	•	•	•
	100–300	100	•	•	•	•	•	•	•	•	•	•	•
	125–300	125	•	•	•	•	•	•	•	•	•	•	•
	150–300	150	•	•	•	•	•	•	•	•	•	•	•
	200–300	200	•	•	•	•	•	•	•	•	•	•	•
	250–300	250	•	•	•	•	•	•	•	•	•	•	•

Part Number Alterations

Part Number	-	A	-	B	-	T	-	(BC, CCA…etc.)
CTA	-	300	-	200	-	12	-	BC195

Alterations	Code	Spec.
	BC	Width (B Dimension) Cuts B dimension. BC = 1 mm Increment **Ordering Code:** BC195 ⓘ 15≤BC≤249

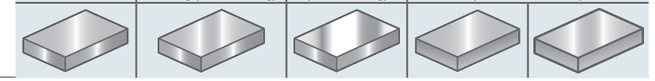
Alterations	Code	Spec.
	CCA CCB CCC CCD	Cuts any corners. 1≤Corner Cut≤10 1 mm Increment **Ordering Code:** (Example) When the corners of A & D are cut by C5 → CCA5-CCD5

MiSUMi

1018 Carbon Steel Plates

Configurable

6-Surface Milling	2-Surface Rotary Grinding (4-Side Milling)	2-Surface Grinding (4-Side Milling)	2-Surface Milling (4-Side Not Finished)	



1018 Carbon Steel Plates – Configurable

RoHS 10

ⓘ Hot rolled, torch cutting, and saw cutting surfaces might remain on A and B surfaces of (L-)SS2F and SS2RG. Also, rust may remain.

6-Surface Finish

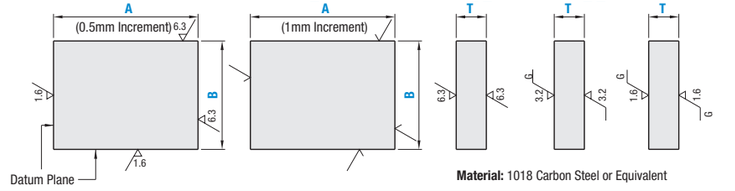
PS_ _ _
L-PS_ _ _

2-Surface Finish (4-Side Not Finished)

SS2F_
L-SS2F_
SS2RG_
L-SS2RG_

2-Surface Finish Method

Milling	Rotary Grinding	Surface Grinding
SS2F_ L-SS2F_ _ PSF_ _ L-PSF_ _	SS2RG_ L-SS2RG_ PSR_ _ L-PSR_ _	PSS_ _ L-PSS_ _



Material: 1018 Carbon Steel or Equivalent

6-Surface Finish						
Part Number				0.5 mm Increment		
2-Surface Finish Method		Type	(1) Plate Thickness Tolerance Selection	(2) A, B Dimension Tolerance Selection	A A≥B	B A≥B	T
Milling	Standard	PSF	P Q N M	P Q N M	20–500	20–300	4–50
	Large	L-PSF			250–2500	10–1500	5–50
Rotary Grinding	Standard	PSR			20–500	20–300	4–50
	Large	L-PSR			250–1600	10–1200	10–50
Surface Grinding	Standard	PSS			20–500	20–300	4–50
	Large	L-PSS			250–800	20–500	5–50

Upper-Lower Surface Finished (Sides Not Finished)							ⓘ Tolerance should be noted.
Part Number				1 mm Increment		0.5 mm Increment	
2-Surface Finish Method		Type	(1) Plate Thickness Tolerance Selection	(2) A, B Dimension Tolerance	A A≥B	B A≥B	T
Milled	Standard	SS2F	P Q N M	A^{+5}_{0} B^{+5}_{0}	20–500	10–300	5–50
	Large	L-SS2F			251–2500	10–1500	
Rotary Grinding	Standard	SS2RG			20–500	10–300	
	Large	L-SS2RG			251–1600	10–1200	10–50

ⓘ There are non machinable areas.

(1) Plate Thickness Tolerance

2-Surface Finish Method	P	Q	N	M
Milled	+0.1–+0.3	0–+0.2	±0.1	-0.2–0
Rotary Grinding	+0.1–+0.3	0–+0.2	±0.1	-0.2–0
Surface Grinding	+0.1–+0.2	0–+0.1	±0.05	-0.1–0

(2) A, B Dimension Tolerance Applicable to 6-Surface Finish only

A, B Dimension	P	Q	N	M
250 mm or Less	+0.1–+0.3	0–+0.2	±0.1	-0.2–0
250.5 mm or More	+0.1–+0.6	0–+0.5	±0.25	-0.5–0

Precision Standards – Standard Size

Max. Value

Item		Upper-Lower Finish Method		
		Milled	Rotary Grinding	Surface Grinding
Thickness Parallelism (per 100 mm)		0.05	0.012	0.012
Flatness (per 100 mm)	T4–7.5	0.1	0.05	0.05
	T8–15.5	0.07	0.03	0.03
	T16–25.5	0.05	0.015	0.015
	T26–50	0.05	0.012	0.012
Perpendicularity of Datum Plane (Applicable to 6-Surface Finished Products)		0.015 per 100 mm		
Circumference Chamfering	Upper-Lower Surface Finish	Deburring Only		
	6-Surface Finish	C0.2–C0.5		

Precision Standards – Large Size

Item		Milled			Rotary Grinding			Surface Grinding	
A, B Dimension		~500	~1000	1000.5~	~500	~1000	1000.5~	~500	500.5~
Flatness (per 100 mm)	T5–9.5	0.3	0.5	0.7	0.3	0.5	0.7	0.1	0.2
	T10–19.5	0.3	0.4	0.5	0.3	0.4	0.5	0.1	0.2
	T20–29.5	0.2	0.3	0.5	0.2	0.3	0.5	0.05	0.1
	T30–50	0.2	0.3	0.3	0.2	0.3	0.3	0.05	0.1
Thickness Parallelism (per 100 mm)		0.05			0.012			0.012	
Perpendicularity of Datum Plane (Applicable to 6-Surface Finished Products)		0.015 per 100 mm							
Circumference Chamfering	Upper-Lower Surface Finish	Deburring Only							
	6-Surface Finish	C0.2–C0.5							

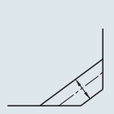
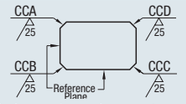
Part Number Example

Part Number										
Type	Upper-Lower Surface Finish	Plate Thickness Tolerance	A, B Dimension Tolerance	-	A	-	B	-	T
PS	F	Q	M	-	255	-	220	-	18

Part Number Alterations

Part Number	-	A	-	B	-	T	-	(CSC / CBC / CCA / etc.)
L-PSRNM	-	1200	-	610	-	30	-	CSC

ⓘ Alteration is not available for 4-side unfinished (L–) SS2F.

	Circumference Chamfering	Corner Cut
Alterations		 ⓘ Surface roughness of corner cut for large size: A>1000 or B>300
Code	CSC / CBC	CCA / CCB / CCC / CCD
Spec.	Changes the circumference chamfering dimension. Chamfering Dimension: Standard C0.2–0.5 / CSC C0.1 or Less / CBC C0.5–1.0	Arbitrary corner can be cut. 1≤Corner Cut≤50 1 mm Increment **Ordering Code:** (Ex.) When the corners of A and D are cut by C5, → CCA5-CCD5

1mm Increment
1–5
6–10
11–20
21–30
31–40
41–50