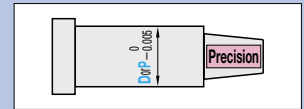


PRECISION SHORT TIP (ℓ) ONE-STEP CORE PINS

—SHAFT DIAMETER (D) SELECTION TYPE / SHAFT DIAMETER (P) 0.005mm DESIGNATION TYPE—



Ⓜ Non JIS material definition is listed on P.1351 - 1352

RoHS	M	Part Number				
		Type	Step	Shape		
		SKD61 equivalent 48~52HRC	S-CPZ-	S-CPZB-	1A	Not processed
					1B	C
					1C	T
					1D	R
		SKH51 equivalent 58~60HRC	S-CPV-	S-CPVB-		B

Step type selected from 1A~1D below

1A

Shape Select a tip shape from the drawings on the right.

$\ell \geq 0.3 + \alpha$

1B

Shape

$\ell \geq 0.4 + \alpha$

1C

Shape

$\ell \geq \frac{(\text{DorP}) - A}{2} + 0.3 + \alpha$

When AC code is used
 $\ell \geq \frac{(\text{DorP}) - A}{2 \tan AC} + 0.3 + \alpha$

1D

Shape

$\ell \geq C + 0.3 + \alpha$

$C = \frac{(\text{DorP}) - A}{2}$ [Step] 1C

Shape (Tip shape: V is dimension before tip processing.)

(Not processed)

Designation of the shape is unnecessary when tip processing is not required.
 $\alpha = 0 \quad \theta \leq 10^\circ$

(C chamfered)

$0.1 \leq G < V/2$
 0.05mm increments
 $\alpha = G \quad \theta \leq 10^\circ$

(Tapered)

$0.1 \leq S < \frac{V}{2 \tan K}$
 0.05mm increments
 $10 \leq K \leq 45$
 1° increments
 $\alpha = S \quad \theta \leq 10^\circ$

(R chamfered)

$0.2 \leq Q < V/2$
 0.1mm increments
 $\alpha = Q \quad \theta \leq 10^\circ$

(Spherical processed)

$\alpha = V/2 \quad \theta \leq 10^\circ$

Ⓜ Refer to the [Shape] drawing for L tolerance

(Calculation of tip gradient θ P.1315)

Shaft diameter (D) selection type

H	Part Number			0.01mm increments				A	Vmin.	C	ℓmax.	
	Type	Step	Shape	D	L		F					
3	S-CPZ-	1A	Designation is unnecessary when tip processing is not required.	1	12.00	100.00	10.00	L-ℓmin.	D > A ≥ V	0.50	Only [Step] 1D designated	ℓ ≤ D (when ℓ > D) P.449
4				1.5								
5				2								
6				2.5								
7				3								
8				3.5								
9	4	4.5	5	5.5	6							

Shaft diameter (P) designation type

H	Part Number				0.01mm increments		0.005mm increments		0.01mm increments			ℓmax.		
	Type	Step	Shape	No.	L		P		F		A		Vmin.	C
3	S-CPZB-	1A	Designation is unnecessary when tip processing is not required.	1	12.00	100.00	0.800~0.995		10.00	L-ℓmin.	P > A ≥ V	0.50	Only [Step] 1D designated	ℓ ≤ P (when ℓ > P) P.451
4				1.5			1.000~1.495							
5				2			1.500~1.995							
6				2.5			2.000~2.495							
7				3			2.500~2.995							
8				3.5			3.000~3.495							
9	4	3.500~3.995	4.000~4.495	4.500~4.995	5.000~5.495	5.500~5.995								

Order Part Number - L - P - F - A - V - C - Tip size (K · S · G · Q)

Shaft diameter (D) selection type S-CPZ-1B 4 - 38.00 - F37.50 - A2.80 - V2.74

Shaft diameter (P) designation type S-CPVB-1BR 4.5 - 45.00 - P4.40 - F44.40 - A3.70 - V3.60 - Q0.2

Days to Ship Quotation Price Quotation

Alterations Part Number - L - P - F(FC) - A - V(VC) - C - Tip size (K · S · G · Q) - (KC · WKC...etc.)

Shaft diameter (D) selection type S-CPZ-1A 2 - 15.00 - F14.70 - V1.95 - HC3.8 - TC2

Shaft diameter (P) designation type S-CPVB-1BR 4.5 - 45.00 - P4.40 - F44.40 - A3.70 - V3.60 - Q0.2 - TC2

Alterations	Code	Spec.	1Code	Alterations	Code	Spec.	1Code
	KC	Single flat cutting (D or P)/2 ≤ KC < H/2	Quotation		HC	Head diameter change HC = 0.1mm increments (D or P) ≤ HC < H Ⓜ In relation to the diameter tolerance, alteration may create a straight piece with little diameter difference between the head and shaft.	
	WKC	Two flats cutting (D or P)/2 ≤ WKC < H/2	Quotation		HCC	Head diameter change (precision) HCC = 0.1mm increments (D or P) + 0.5 ≤ HCC < H - 0.3	
	KAC	Varied width parallel flats cutting (D or P)/2 ≤ KAC < H/2 KAC = 0.1mm increments only KAC < KBC < H/2	Quotation		TC	Head thickness change TC = 0.1mm increments 1.5 ≤ TC < 4 (Dimensions L and F remain unchanged.) 4 - TC ≤ Lmax. - L	
	RKC	Two flats (right angled) cutting (D or P)/2 ≤ RKC < H/2	Quotation		TRN	Relief under the head (No need for plate chamfering)	
	DKC	Three flats cutting (D or P)/2 ≤ DKC < H/2	Quotation		NHC	Numbering on the head How to order P.442 Ⓜ Available when H ≥ 2 Ⓜ Combination with SKC not available. Changes the standard angle (Ks = 45°) AC = 1° increments Ⓜ Available for [Step] 1C Ⓜ 30 ≤ AC ≤ 60 Ⓜ When [Step] 1D, C ≤ 1.0 · A + 2(C · tan AC) < (D or P)	
	SKC	Four flats cutting (D or P)/2 ≤ SKC < H/2	Quotation		VC	Vmin. is enlarged. VC = 0.01mm increments Ⓜ (D or P) > A ≥ VC Ⓜ Regarding DorNo. = 2~3, 4.5 and 5, Vmin. is the machining limit, and VC cannot be used.	
	KGC	Two flats (angled) cutting (D or P)/2 ≤ KGC < H/2 0 < AG < 360 AG = 1° increments	Quotation		FC	F dimension becomes shorter than Fmin. Makes L dimension shorter than L min. too. FC ≥ 5mm Ⓜ It can be designated up to Lmin. = 6.5mm.	
	KTC	Three flats cutting at 120° (D or P)/2 ≤ KTC < H/2	Quotation		GVC	Gas vent machining GS · GB = 1mm increments Ⓜ Available when (D or P) ≥ 2 Ⓜ 2 ≤ GS ≤ 10 GS + 2 ≤ GB ≤ 30 Fmin. ≤ F - GB How to order P.442	

Steps-Type Round Core Pins Precision