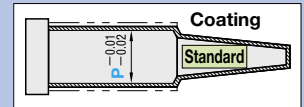


COATED ONE-STEP CORE PINS

—SHAFT DIAMETER (P) DESIGNATION (0.01mm INCREMENTS) • TiCN COATING—



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

RoHS

Guide for TiCN Coating

- TiCN coating, applied through PVD (physical vapor deposition), features excellent abrasion and corrosion resistance properties, and improves mold-release performance.

Hardness 3000HV~
Coating thickness 2~5μm
Color Blue-gray

• Coating made on the tip and shaft.

Ⓜ The dimensions and tolerances shown in the drawings are the values after the product is coated.
Ⓜ The thickness of coating layer may be slightly inconsistent around the tip corners.

SKD61 equivalent
48~52HRC

Step type selected from 1A~1E below

1A

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

Ⓜ $l \geq 0.5 + \alpha$

1B

Shape

Ⓜ $l \geq 0.7 + \alpha$

1C

Shape

Ⓜ $l \geq \frac{P-A}{2} + 0.5 + \alpha$
When AC code is used
 $l \geq \frac{P-A}{2 \tan AC} + 0.5 + \alpha$

1D

Shape

Ⓜ $l \geq C + 0.5 + \alpha$

1E

Shape

Ⓜ $l \geq R + 0.5 + \alpha$

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

(Not processed) Ⓜ Designation of the shape is unnecessary when tip processing is not required.

$\alpha = 0$

C (C chamfered)

$0.5 \leq G < V/2$
0.1mm increments
 $\alpha = G \quad \theta < 45^\circ$

G (Cone)

$20 < K \leq 60$
1° increments
 $\alpha = \frac{V}{2 \tan K} \quad \theta < K$

T (Tapered)

$0.1 \leq S < \frac{V}{2 \tan K}$
0.1mm increments
 $20 \leq K \leq 45$
1° increments
 $\alpha = S \quad \theta < K$

R (R chamfered)

$0.2 \leq Q < V/2$
0.1mm increments
 $\alpha = Q$

B (Spherical processed)

$\alpha = V/2$

Ⓜ Refer to the [Shape] drawing for L tolerance

(Calculation of tip gradient θ Ⓜ P.1315)

H	Part Number				0.01mm increments				0.1mm increments	ℓmax.	
	Type	Step	Shape	No.	L	P	F	A	Vmin.		C · R
7	H-CPDB	1A	C	3.5	12.00~120.00	3.00~3.49	F≥10.00	P>A≥V	1.00	C < P-A/2 ※0.1≤C≤4.0 ※When CVC code is used	40.00
4				3.50~3.99		45.00					
4.5				4.00~4.49		50.00					
5				4.50~4.99							
5.5				5.00~5.49							
6		5.50~5.99	2.00	(Only [Step] 1D) designated R ≤ P-A/2 R ≥ 0.2 (Only [Step] 1E) designated							
6.5		6.00~6.49									
7		6.50~6.99									
8		7.00~7.99									
10		8.00~9.99									
15	10.00~12.99	5.00									
18	13.00~15.99										
21											
25			20	30.00~120.00	16.00~19.99	F≥28.00					

Order

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

H-CPDB1BC5 — 50.00 — P4.70 — F40.00 — A3.50 — V3.00 — — G1.0
H-CPDB1EG6 — 60.00 — P5.90 — F45.00 — A5.00 — V3.00 — R0.4 — K45

Days to Ship **Quotation** **Price** **Quotation**

Alterations

Part Number — L — P — F — A — V(VC) — C(CVC) — R(RE) — Tip size (K · S · G · Q) — (KC · WKC...etc.)

H-CPDB1EG6 — 38.00 — P5.70 — F29.00 — A3.00 — V2.50 — — R0.3 — K45 — HC8.0

Alteration details Ⓜ P.441

Alterations	Code	Spec.	1Code	Alterations	Code	Spec.	1Code
	KC	Single flat cutting P/2 ≤ KC < H/2			TRN	Relief under the head (No need for plate chamfering)	
	WKC	Two flats cutting P/2 ≤ WKC < H/2	About Designation Unit for Key Flat Cutting		NHC	Numbering on the head How to order Ⓜ P.442 Ⓜ Combination with SKC not available.	
	KAC KBC	Varied width parallel flats cutting P/2 ≤ KAC < H/2 KBC = 0.1mm increments only KAC < KBC < H/2	(1) To align the key flat with the shaft diameter		RR	Changes R (normally 0.2 or less) to R0.3~0.5 (improves strength) Ⓜ Available for [Step] 1B/1C/1D Ⓜ [Step] 1B · 1C · P-A ≥ 1.0 Ⓜ [Step] 1D · C ≥ 0.5	
	RKC	Two flats (right angled) cutting P/2 ≤ RKC < H/2	Unit of designation 0.005mm increments possible		RE	R shape alteration (enlargement) RE = 0.5mm increments Ⓜ 0.5 ≤ RE ≤ 2.0 Ⓜ Available for [Step] 1E only	
	DKC	Three flats cutting P/2 ≤ DKC < H/2	Ⓜ Quotation		AC	Changes the standard angle (Ks=45°). AC = 1° increments Ⓜ 30 ≤ AC ≤ 60 Ⓜ Available for [Step] 1C · 1D Ⓜ Combination with CVC RR not available. Ⓜ [Step] 1D : C ≤ 1.0, A + 2(C × tan AC) < P	
	SKC	Four flats cutting P/2 ≤ SKC < H/2		(2) To designate arbitrary key flat dimensions Unit of designation 0.1mm		CVC	C dimension can be designated at 0.01mm increments. Ⓜ 0.50 ≤ CVC ≤ 1.00 Ⓜ Available for [Step] 1D Ⓜ CVC < (P-A)/2 Ⓜ Combination with AC not available.
	KGC	Two flats (angled) cutting P/2 ≤ KGC < H/2 0 < AG < 360 AG = 1° increments			VC	Vmin. is enlarged. VC = 0.01mm increments Ⓜ ℓ ≤ A × 5, ℓ ≤ 50 (P × 5 for [Step] 1A) Ⓜ P > A ≥ VC Ⓜ Regarding No. 3.5~5 · 13 · 16, Vmin. is the machining limit, and VC cannot be used.	
	KTC	Three flats cutting at 120° P/2 ≤ KTC < H/2			GVC	Gas vent machining GS · GB = 1mm increments Ⓜ 2 ≤ GS ≤ 10 GS + 2 ≤ GB ≤ 30 Fmin. ≤ F - GB How to order Ⓜ P.442	
	HC	Head diameter change HC = 0.1mm increments P ≤ HC < H Ⓜ In relation to the diameter tolerance, alteration may create a straight piece with little diameter difference between the head and shaft.					
	HCC	Head diameter change (precision) HCC = 0.1mm increments P + 0.5 ≤ HCC < H - 0.3					

Steps-Type Round Core Pins Standard