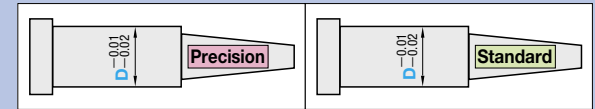


High Speed Steel
SKH51 equivalent
D^{-0.01}_{-0.02}

ONE-STEP CENTER PINS

—SHAFT DIAMETER (D) SELECTION TIP (A · V) TOLERANCE ±0.005 / ±0.01 / ±0.02 TYPE—



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

Ⓜ Refer to shaft diameter designation type **P.359** when shaft diameter is designated.



Ⓜ SKH51 equivalent Range of guaranteed shaft diameter precision (Details **P.1305**)
Ⓜ S8~60HRC Range of guaranteed base material hardness (Details **P.1307**)

Type	D	Head Thickness (T)	Applicable ejector sleeve hole tolerance
CPXE-5	-0.01 -0.02	4mm (T4)	+0.01 or H7 Details P.1309
CPHE-5			
CPVE-5			
CPXJE-5		4 · 6 · 8mm (JIS)	
CPHJE-5			
CPVJE-5			

Step (Step type) Select from A~E in the drawings below

Step A $R \leq 0.5 (D \leq 2 \dots R \leq 0.3)$ $\ell \geq 0.5 + \alpha$

Step B $R \leq 0.5 (D \leq 2 \dots R \leq 0.3)$ $R \leq 0.2$ $\ell \geq 0.7 + \alpha$

Step C $R \leq 0.5 (D \leq 2 \dots R \leq 0.3)$ $K_s = 45^\circ$ $R \leq 0.2$ $\ell \geq \frac{D-A}{2} + 0.5 + \alpha$
When AC code is used $\ell \geq \frac{D-A}{2 \tan AC} + 0.5 + \alpha$

Step D $R \leq 0.5 (D \leq 2 \dots R \leq 0.3)$ $K_s = 45^\circ$ $C \pm 0.05$ $R \leq 0.2$ $\ell \geq C + 0.5 + \alpha$

Step E $R \leq 0.5 (D \leq 2 \dots R \leq 0.3)$ $R \pm 0.1$ $\ell \geq R + 0.5 + \alpha$

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) $0.5 \leq G < V/2$ $G \pm 0.05$ 0.1mm increments $\alpha = G \theta < 45^\circ$ (Calculation of θ **P.1315**)

G (Cone) $20 < K \leq 60$ 1° increments $\alpha = \frac{V}{2 \tan K} \theta < K$ (Calculation of θ **P.1315**)

T (Tapered) $0.1 \leq S < \frac{V}{2 \tan K}$ 0.1mm increments $20 < K \leq 45$ 1° increments $\alpha = S \theta < K$ (Calculation of θ **P.1315**)

R (R chamfered) $0.2 \leq Q < V/2$ 0.1mm increments $\alpha = Q$

B (Spherical processed) $\alpha = V/2$

4mm head	JIS head		Part Number				0.01mm increments				0.1mm increments	ℓ	
	H	T	4mm head	JIS head	Step	Shape	D	L	F	A	Vmin.		C · R
3	3	4	CPXE-5 CPHE-5 CPVE-5	CPXJE-5 CPHJE-5 CPVJE-5	A B C D E	C G T R B	1	70.00~200.00	F ≥ 50.00	D > A ≥ V No need to designate A when Step A is selected.	0.50	0.1 ≤ C ≤ 1.5 and C < $\frac{D-A}{2}$	15
4	4	1.5					70.00~250.00	20					
5	5	2					70.00~250.00	25					
6	6	2.5					70.00~250.00	30					
7	7	3					70.00~300.00	35					
8	8	3.5					70.00~300.00	40					
8	4	4					70.00~300.00	45					
9	9	4.5					70.00~300.00	50					
10	10	5					70.00~300.00						
11	11	5.5					70.00~300.00						
14	14	6					70.00~300.00						
15	15	6.5					70.00~300.00						
17	17	7	70.00~350.00	8									
		8	70.00~350.00	9									
		9	70.00~350.00	10									
		10	70.00~350.00	11									
		11	70.00~350.00	12									

Ⓜ Step E is D ≥ 1.5 Ⓜ Refer to the drawing for ℓ min. (normally, α = 0)

Order **Part Number** - L - F - A - V - C(R) - Tip size (K · S · G · Q)
CPHE-5EG 6 - 350.00 - F330.00 - A5.00 - V4.50 - R0.5 - K4.5

Days to Ship **Quotation**

Alterations **Part Number** - L - F - A - V - C(R) - Tip size (K · S · G · Q) - (KC · WKC...etc.)
CPHE-5EG 6 - 350.00 - F330.00 - A5.00 - V4.50 - R0.5 - K4.5 - KC3.0

Alteration details **P.351**

Alterations	Code	Spec.	1Code	Alterations	Code	Spec.	1Code
	VKC	Single flat cutting (precision) D/2 ≤ VKC < H/2			HC	HC = 0.1mm increments D ≤ HC < H, D ≥ 1.5 In relation to the diameter tolerance, alteration may create a straight piece with little diameter difference between the head and shaft.	
	VWC	Two flats cutting (precision) D/2 ≤ VWC < H/2			HCC	HCC = 0.1mm increments D + 1 ≤ HCC < H - 0.3, D ≥ 1.5	
	KC	Single flat cutting D/2 ≤ KC < H/2	About Designation Unit for Key Flat Cutting		TC	TC = 0.1mm increments T/2 ≤ TC < T, D ≥ 1.5 T - TC ≤ Lmax. - L (Dimensions L and F remain unchanged)	
	WKC	Two flats cutting D/2 ≤ WKC < H/2	(1) To align the key flat with the shaft diameter		NC	Dowel hole boring Available when H ≥ 4 Combination with other than NHC · NHN · AC · RR not available.	
	KAC KBC	Varied width parallel flats cutting D/2 ≤ KAC < H/2 KBC = 0.1mm increments only KAC < KBC < H/2	Unit of designation 0.05mm increments possible		NCW	Dowel hole boring + Spring pin driving Available when H ≥ 4 Combination with other than NHC · NHN · AC · RR not available.	
	RKC	Two flats (right angled) cutting D/2 ≤ RKC < H/2	(2) To designate arbitrary key flat dimensions		NHC	Numbering on the head How to order P.352 Available when H ≥ 2	
	DKC	Three flats cutting D/2 ≤ DKC < H/2	Unit of designation 0.1mm		NHN	Automatic sequential numbering on the head How to order P.352 Available when H ≥ 2	
	KGC	Two flats (angled) cutting D/2 ≤ KGC < H/2 AG = 1° increments 0 < AG < 360			AC	Changes the standard angle (Ks = 45°). AC = 1° increments 30 ≤ AC ≤ 60 Available for Step C · D Combination with RR not available. When Step D, C ≤ 1.0, A + 2(C × tan AC) < D	
	KTC	Three flats cutting at 120° D/2 ≤ KTC < H/2			RR	Changes R (normally 0.2 or less) to R0.3~0.5. (for strength improvement) [Designation method] RR Available for Step B · C · D D - A ≥ 1.0 When Step D, C ≥ 0.5	

Price **Quotation**