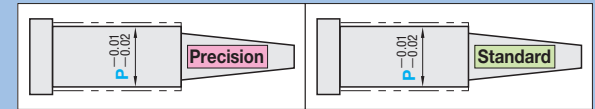


High Speed Steel
SKH51 equivalent
P^{+0.01}_{-0.02}

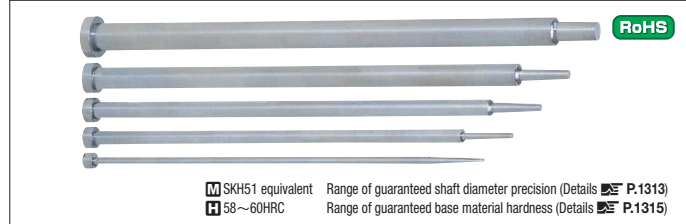
ONE-STEP CENTER PINS

—SHAFT DIAMETER (P) DESIGNATION (0.01mm INCREMENTS) TIP (A · V) TOLERANCE : ±0.005/±0.01/±0.02 TYPE—



Ⓜ Non JIS material definition is listed on P.1359 - 1360

Ⓜ For shaft diameter selection type, refer to P.357.



Type	P	Head Thickness (T)	Applicable ejector sleeve hole tolerance
CPXGE-5	-0.01 -0.02	4mm (T4)	+0.01 or H7 Details P.1317
CPHGE-5			
CPVGE-5			
CPXJGE-5			
CPHJGE-5			
CPVJGE-5	4 · 6 · 8mm (JIS)		

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

Step A $R \leq 0.5 (P \leq 2 \rightarrow R \leq 0.3)$ $\ell \geq 0.5 + \alpha$

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

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

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

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

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) $0.5 \leq G < V/2$ 0.1mm increments $\alpha = G \theta < 45^\circ$ (Calculation of θ P.1323)

G (Cone) $20 < K \leq 60$ $1^\circ \text{ increments}$ $\alpha = \frac{V}{2 \tan K} \theta < K$ (Calculation of θ P.1323)

T (Tapered) $0.1 \leq S < \frac{V}{2 \tan K}$ 0.1mm increments $20 < K \leq 45$ $1^\circ \text{ increments}$ $\alpha = S \theta < K$ (Calculation of θ P.1323)

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
		Type		Step	Shape	No.	L	P	F	A		
3	3	CPXGE-5 CPXJGE-5 CPHGE-5 CPHJGE-5 CPVGE-5 CPVJGE-5	A								C	1
4	4			150.01~200.00	0.90~0.99	20						
5	5			70.00~250.00	1.00~1.49	25						
6	6			2.00~2.49	1.50~1.99	30						
7	7			2.50~2.99	2.00~2.49	35						
8	8			3.00~3.49	2.50~2.99	40						
9	9			3.50~3.99	3.00~3.49	45						
10	10			4.00~4.49	3.50~3.99	50						
11	11			4.50~4.99	4.00~4.49							
12	12			5.00~5.49	4.50~4.99							
13	13			5.50~5.99	5.00~5.49							
14	14			6.00~6.49	5.50~5.99							
15	15			6.50~6.99	6.00~6.49							
16	16			7.00~7.99	6.50~6.99							
17	17			8.00~9.99	7.00~7.99							
					8.00~9.99							
					10.00~11.99							

Ⓜ [Shape] C · G · T · R · B is No.1.5 (P ≥ 1.0)~ Ⓜ [Step] E is No.1.5 (P ≥ 1.10)~ Ⓜ Refer to the drawing for ℓ min. (normally, α = 0)

Order Part Number — L — P — F — A — V — C(R) — Tip size (K · S · G · Q)
CPHGE-5ET 6 — 350.00 — P5.95 — F330.00 — A5.00 — V4.50 — R0.5 — K35 — S1.0

Days to Ship 3 Days Express A P.46
Ⓜ Delivery days depend on subsidiary. P.45

Alterations Part Number — L — P — F — A — V — C(R) — Tip size (K · S · G · Q) — (KC · WKC...etc.)
CPHGE-5ET 6 — 350.00 — P5.95 — F330.00 — A5.00 — V4.50 — R0.5 — K35 — S1.0 — KC3.0

Alterations	Code	Spec.	1Code
	VKC	Single flat cutting (precision) P/2 ≤ VKC < H/2	
	VWC	Two flats cutting (precision) P/2 ≤ VWC < H/2	
	KC	Single flat cutting P/2 ≤ KC < H/2	About Designation Unit for Key Flat Cutting
	WKC	Two flats cutting P/2 ≤ WKC < H/2	(1) To align the key flat with the shaft diameter
	KAC	Varied width parallel flats cutting P/2 ≤ KAC < H/2	Unit of designation 0.005mm increments possible
	KBC	KBC = 0.1mm increments only KAC < KBC < H/2	
	RKC	Two flats (right angled) cutting P/2 ≤ RKC < H/2	(2) To designate arbitrary key flat dimensions Unit of designation 0.1mm
	DKC	Three flats cutting P/2 ≤ DKC < H/2	
	KGC	Two flats (angled) cutting P/2 ≤ KGC < H/2 AG = 1° increments 0 < AG < 360	
	KTC	Three flats cutting at 120° P/2 ≤ KTC < H/2	

Alterations	Code	Spec.	1Code
	HC	HC = 0.1mm increments P ≤ HC < H, P ≥ 1.5 In relation to the diameter tolerance, alteration may create a straight piece with little diameter difference between the head and shaft.	
	HCC	HCC = 0.1mm increments P + 1 ≤ HCC < H - 0.3, P ≥ 1.5	
	TC	TC = 0.1mm increments T/2 ≤ TC < T, P ≥ 1.5 T - TC ≤ Lmax. - L (Dimensions L and F remain unchanged)	
	NC	Dowel hole boring Available when H ≥ 4 Combination with other than NHC · NHN · AC · RR not available.	
	NCW	Dowel hole boring + Spring pin driving Available when H ≥ 4 Combination with other than NHC · NHN · AC · RR not available.	
	NHC	Numbering on the head How to order P.354 Available when H ≥ 2 Express services not available.	
	NHN	Automatic sequential numbering on the head How to order P.354 Available when H ≥ 2 Express services not available.	
	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) < P	
	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 P - A ≥ 1.0 When [Step] D, C ≥ 0.5	

Price Quantity discount rate P.45

Quantity	1~4	5~12	13~19	20~50
Rate	—	5%	10%	15%

To be quoted on price & lead time above Max. Q'ty.

Stepped Center Pins
High Speed Steel SKH51 equivalent