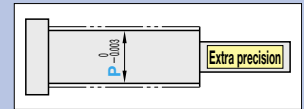


EXTRA PRECISION TAPERLESS ONE-STEP CORE PINS (NO DRAFT ANGLE CORE PINS)

—SHAFT DIAMETER (P) DESIGNATION (0.001mm increments) TYPE—



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

| | | | | | |
|--|------------------------------|--------|-------------|------------------|----------------------------|
| | RoHS | M | Part Number | | |
| | | Ⓜ | Type | Step | Shape |
| | SKH51 equivalent 58~60HRC | CPMBS— | | B C D E | S C G T R B |

Step (Step type) Select from B~E in the drawing below.

B

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

$\ell \geq 0.4 + \alpha$
When RC code is used $\ell \geq 0.35 + \alpha$

C

Shape

$\ell \geq \frac{P-A}{2} + 0.3 + \alpha$
When AC code is used $\ell \geq 2 \tan AC^{\circ} + 0.3 + \alpha$

D

Shape

$C = \frac{P-A}{2} \rightarrow$ Step C
 $\ell \geq C + 0.3 + \alpha$
When CVC code is used $\ell \geq CVC + 0.3 + \alpha$

E

Shape

$P \geq 0.900$
 $\ell \geq R + 0.3 + \alpha$

Shape (Tip shape)

S (Not processed)

$\alpha = 0$

When LKC code is used $L \begin{matrix} +0.005 \\ 0 \end{matrix}$

C (C chamfering)

$0.1 \leq G < A/2$
0.05mm increments
 $\alpha = G$

When LKC code is used $L \begin{matrix} +0.005 \\ 0 \end{matrix}$

G (Cone)

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

T (Tapered)

$0.1 \leq S < \frac{A}{2 \tan K}$
0.05mm increments
 $0 < K \leq 45$
1° increments
 $\alpha = S$

When LKC code is used $L \begin{matrix} +0.005 \\ 0 \end{matrix}$

R (R chamfering)

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

When LKC code is used $L \begin{matrix} +0.005 \\ 0 \end{matrix}$

B (Spherical processed)

$\alpha = A/2$

| H | Part Number | | | | 0.01mm increments L | | 0.001mm increments min.P max. | | 0.01mm increments F | | 0.001mm increments A | | 0.1mm increments C R | | ℓ max. |
|----|-------------|------------------|----------------------------|-----|---------------------|--------|-------------------------------|------|---------------------|--|----------------------|-------|---|---|---------------------|
| | Type | Step | Shape | No. | min. | max. | min. | max. | min. | max. | min. | max. | C | R | |
| 3 | CPMBS— | B C D E | S C G T R B | 1 | 14.00 | 100.00 | 0.800 ~ 0.999 | | 12.00 | L-ℓ min. ℓ min. Refer to [Step] drawing | 0.500 | P > A | Only [Step] D is designated. C < P-A/2 and 0.1 ≤ C ≤ 4.0 | Only [Step] E is designated. R ≤ P-A/2 and R ≥ 0.2 | ℓ ≤ 12XA and ℓ ≤ 35 |
| 4 | | | | 1.5 | | | 1.000 ~ 1.499 | | | | | | | | |
| 5 | | | | 2 | | | 1.500 ~ 1.999 | | | | | | | | |
| 6 | | | | 2.5 | | | 2.000 ~ 2.499 | | | | | | | | |
| 7 | | | | 3 | | | 2.500 ~ 2.999 | | | | | | | | |
| 8 | | | | 3.5 | | | 3.000 ~ 3.499 | | | | | | | | |
| 9 | | | | 4 | | | 3.500 ~ 3.999 | | | | | | | | |
| 10 | | | | 4.5 | | | 4.000 ~ 4.499 | | | | | | | | |
| 11 | | | | 5 | | | 4.500 ~ 4.999 | | | | | | | | |
| 15 | | | | 5.5 | | | 5.000 ~ 5.499 | | | | | | | | |
| 15 | | | | 6 | | | 5.500 ~ 5.999 | | | | | | | | |
| 18 | | | | 6.5 | | | 6.000 ~ 6.499 | | | | | | | | |
| | | | | 7 | | | 6.500 ~ 6.999 | | | | | | | | |
| | 7 | 7.000 ~ 7.999 | | | | | | | | | | | | | |
| | 10 | 8.000 ~ 9.999 | | | | | | | | | | | | | |
| | 13 | 10.000 ~ 12.999 | | | | | | | | | | | | | |

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

CPMBS—BS 4 — 45.55 — P3.980 — F40.00 — A3.500
 CPMBS—CC 6 — 52.30 — P5.560 — F42.50 — A4.600 — G1.0
 CPMBS—DG 5 — 48.62 — P4.770 — F37.55 — A4.000 — C0.2 — K30
 CPMBS—ER 6.5 — 55.65 — P6.230 — F42.35 — A4.500 — R0.5 — Q0.5

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

Alterations Part Number — L — P — F(FC) — A(AAC) — C(CVC) · R — K · S · G · Q — (K · WKC...etc.)

CPMBS—DC6 — 65.00 — P5.750 — F55.00 — A3.500 — C0.5 — G0.5 — RC — KC3.0
 CPMBS—DS5 — 50.00 — P4.895 — F38.00 — A2.000 — C0.3 — TRN

Alteration details P.495

| Alterations | Code | Spec. | 1Code | Alterations | Code | Spec. | 1Code |
|-------------|------------|---|--|-------------|------|---|-------|
| | KC | Single flat cutting P/2 ≤ KC < H/2 | | | TRN | Relief under the head (Makes plate chamfering unnecessary) | |
| | WKC | Two flats cutting P/2 ≤ WKC < H/2 | | | NHC | Numbering on the head How to order P.496 Available when H ≥ 2 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 | About Designation Unit for Key Flat Cutting | | LKC | L dimension tolerance alteration (L designation in 0.005mm increments possible) Available when 1.500 ≤ P ≤ 5.000 Combination with FC not available. Available for [Shape] S · C · T · R | |
| | RKC | Two flats (right angled) cutting P/2 ≤ RKC < H/2 | (1) To align the key flat with the shaft diameter | | AAC | Extends the working limit of A min. AAC = 0.001mm increments ℓ ≤ 10 × AAC In case of No-2~3 · 4.5 · 5, A min. is the machining limit, and AAC cannot be used. | |
| | DKC | Three flats cutting P/2 ≤ DKC < H/2 | (Unit of designation) 0.0005mm increments possible | | RC | Changes R (normally ≤ 0.1) to R ≤ 0.05. Designation method RC Available for [Step] B · C · D | |
| | SKC | Four flats cutting P/2 ≤ SKC < H/2 | (2) To designate arbitrary key flat dimensions | | CVC | C dimension can be designated at 0.01mm increments. 0.10 ≤ CVC ≤ 1.00 CVC = 0.01mm increments Available for [Step] D | |
| | KGC | Two flats (angled) cutting P/2 ≤ KGC < H/2 0 < AG < 360 AG = 1° increments | (Unit of designation) 0.1mm | | AC | Changes the standard angle (Ks = 45°). AC = 1° increments Available for [Step] C · D 30 ≤ AC ≤ 60 Combination with CVC/RC not available. When [Step] D, C ≤ 1.0, A + 2(C × tan AC) < P | |
| | KTC | Three flats cutting at 120° P/2 ≤ KTC < H/2 | | | FC | F dimension becomes shorter than F min., and L dimension becomes shorter than L min., too. FC ≤ 5mm It can be designated up to L min. = 6.5mm. | |
| | 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. | | | GVC | Gas vent machining GS · GB = 1mm increments Available when P ≥ 2.00 2 ≤ GS ≤ 10 GS + 2 ≤ GB ≤ 30 F min. ≤ F - GB How to order P.496 | |
| | HCC | Head diameter change (precision) HCC = 0.1mm increments P + 0.5 ≤ HCC < H - 0.3 | | | TC | Head thickness change TC = 0.1mm increments 1.5 ≤ TC < 4 (Dimensions L and F remain unchanged) 4 - TC ≤ Lmax. - L | |