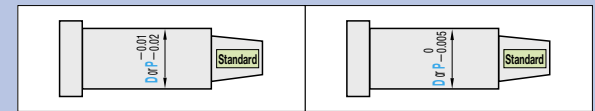


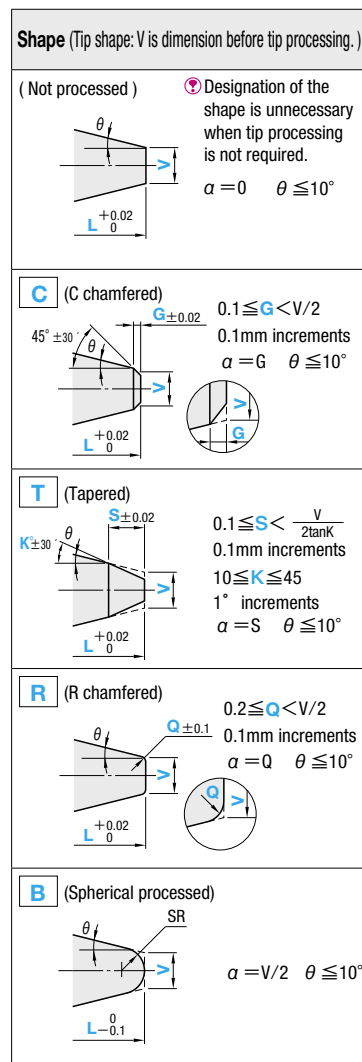
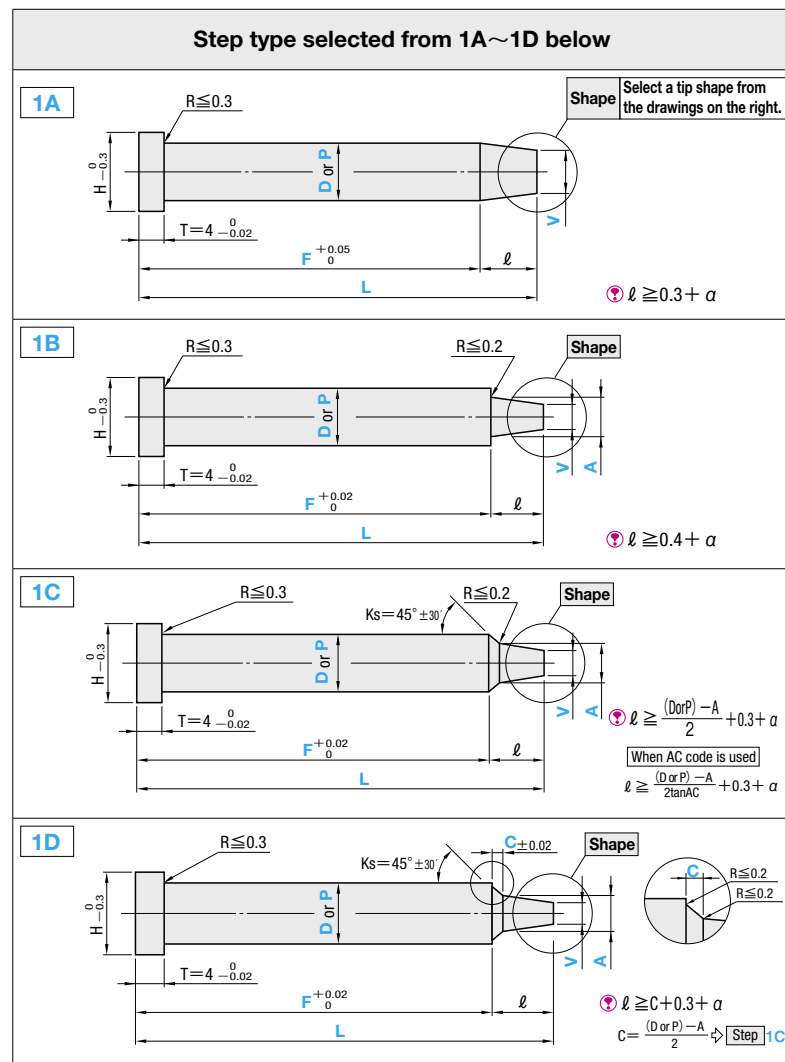
SHORT TIP (ℓ) ONE-STEP CORE PINS

—SHAFT DIAMETER (D) SELECTION TYPE / SHAFT DIAMETER (P) DESIGNATION (0.01mm INCREMENTS) TYPE—



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

| RoHS | M H | Part Number | | | | Step | Shape |
|------------------------------|--------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|------------------|-------|
| | | Type | | | | | |
| | | Shaft diameter (D) selection type | Shaft diameter (P) designation type | Shaft diameter (D) selection type | Shaft diameter (P) designation type | | |
| SKD61 equivalent 48~52HRC | S-CPD | S-CPP | S-CPDB | S-CPPB | 1A | Not processed | |
| SKH51 equivalent 58~60HRC | S-CPX | S-CPH | S-CPXB | S-CPHB | 1B 1C 1D | C T R B | |



Ⓜ Refer to the **Shape** drawing for L tolerance

(Calculation of tip gradient θ Ⓜ P.1315)

Shaft diameter (D) selection type

| H | Part Number | | Step | Shape | 0.01mm increments | | | | A | Vmin. | C | ℓmax. |
|---|---|---|------|---|-------------------|--------|--------|--------|-----------------------------------|---|---------------------------------|--|
| | Type | No. | | | L min. | L max. | F min. | F max. | | | | |
| 3 | Shaft diameter tolerance -0.01 to -0.02 Shaft diameter tolerance 0 to -0.005 | Shaft diameter tolerance -0.01 to -0.02 Shaft diameter tolerance 0 to -0.005 | 1A | Designation is unnecessary when tip processing is not required. | 1 | 12.00 | 100.00 | 10.00 | L-ℓmin. | D > A ≥ V Step 1A D > V No designation necessary for A | 0.50 | Only [Step] 1D designated ℓ ≤ D (when ℓ > D) Ⓜ P.443 |
| 4 | | | | | 2 | | | | | | | |
| 5 | | | | | 3 | | | | | | | |
| 6 | | | | | 4 | | | | | | | |
| 7 | | | | | 5 | | | | | | | |
| 8 | | | | | 6 | | | | | | | |
| 9 | S-CPD | S-CPP | 1C | C | 3.5 | 4.5 | 5.5 | 6 | ℓmin. Refer to the [Step] drawing | 0.70 | C < (D-A)/2 and 0.10 ≤ C ≤ 0.50 | |
| 9 | S-CPX | S-CPH | 1D | T R B | 4.5 | 5.5 | 6 | 1.50 | 2.00 | | | |

Shaft diameter (P) designation type

| H | Part Number | | Step | Shape | No. | 0.01mm increments | | | | A | Vmin. | C | ℓmax. |
|---|---|--|------|---|-----|-------------------|--------|--------|-----------------------------------|---|---------------------------------|--|-------|
| | Type | No. | | | | L min. | L max. | F min. | F max. | | | | |
| 3 | Shaft diameter (D) selection type S-CPD -1B 4 | Shaft diameter (P) designation type S-CPPB -1BR4.5 | 1A | Designation is unnecessary when tip processing is not required. | 1 | 12.00 | 100.00 | 10.00 | L-ℓmin. | P > A ≥ V Step 1A P > V No designation necessary for A | 0.50 (1.00) | Only [Step] 1D designated ℓ ≤ P (when ℓ > P) Ⓜ P.445 | |
| 4 | | | | | 2 | | | | | | | | |
| 5 | | | | | 3 | | | | | | | | |
| 6 | | | | | 4 | | | | | | | | |
| 7 | | | | | 5 | | | | | | | | |
| 8 | | | | | 6 | | | | | | | | |
| 9 | S-CPDB | S-CPPB | 1B | B | 3.5 | 4.5 | 5.5 | 6 | ℓmin. Refer to the [Step] drawing | 0.70 | C < (P-A)/2 and 0.10 ≤ C ≤ 0.50 | | |
| 9 | S-CPXB | S-CPHB | 1D | T R B | 4.5 | 5.5 | 6 | 1.50 | 2.00 | | | | |

Order

| Part Number | L | P | F | A | V | C | Tip size (K · S · G · Q) |
|--|-------|-------|--------|-------|-------|---|--------------------------|
| Shaft diameter (D) selection type S-CPD -1B 4 | 38.00 | | F37.50 | A2.80 | V2.74 | | |
| Shaft diameter (P) designation type S-CPPB -1BR4.5 | 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) | (K · WKC...etc.) |
|--|-------|-------|--------|-------|-------|---|--------------------------|------------------|
| Shaft diameter (D) selection type S-CPD -1A 2 | 15.00 | | F14.70 | | V1.95 | | | HC3.8 |
| Shaft diameter (P) designation type S-CPPB -1BR4.5 | 45.00 | P4.40 | F44.40 | A3.70 | V3.60 | | Q0.2 | TC2 |

Alteration details Ⓜ P.441

| Alterations | Code | Spec. | 1Code | Alterations | Code | Spec. | 1Code |
|-------------|------------|--|--|-------------|------|---|-------|
| | KC | Single flat cutting (D or P)/2 ≤ KC < H/2 | | | 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 | | | HCC | Head diameter change (precision) HCC=0.1mm increments (D or P) + 0.5 ≤ HCC < H - 0.3 | |
| | KAC KBC | Varied width parallel flats cutting (D or P)/2 ≤ KAC < H/2 KBC=0.1mm increments only KAC < KBC < H/2 | (1) To align the key flat with the shaft diameter [Unit of designation] Shaft diameter (D) selection type 0.05mm increments possible | | 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 | | | TRN | Relief under the head (No need for plate chamfering) | |
| | DKC | Three flats cutting (D or P)/2 ≤ DKC < H/2 | Shaft diameter (P) designation type 0.005mm increments possible | | NHC | Numbering on the head How to order Ⓜ P.442 Ⓜ Available when H ≥ 2 Ⓜ Combination with SKC not available. | |
| | SKC | Four flats cutting (D or P)/2 ≤ SKC < H/2 | | | AC | Changes the standard angle (Ks=45°) AC=1° increments Ⓜ Available for [Step] 1C/1D Ⓜ 30 ≤ AC ≤ 60 Ⓜ When [Step] 1D, C ≤ 1.0, A + 2(C × tanAC) < (D or P) | |
| | KGC | Two flats (angled) cutting (D or P)/2 ≤ KGC < H/2 0 < AG < 360 AG=1° increments | (2) To designate arbitrary key flat dimensions [Unit of designation] 0.1mm | | VC | Vmin. is enlarged. VC=0.01mm increments Ⓜ Regarding DoNo. = 2~3, 4.5 and 5, Vmin. is the machining limit, and VC cannot be used. Ⓜ (D or P) > A ≥ VC | |
| | KTC | Three flats cutting at 120° (D or P)/2 ≤ KTC < H/2 | | | 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. | |
| | | | | | 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 | |