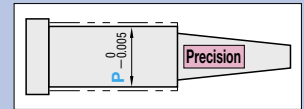


PRECISION ONE-STEP CORE PINS

—SHAFT DIAMETER (P) 0.005mm DESIGNATION TYPE—

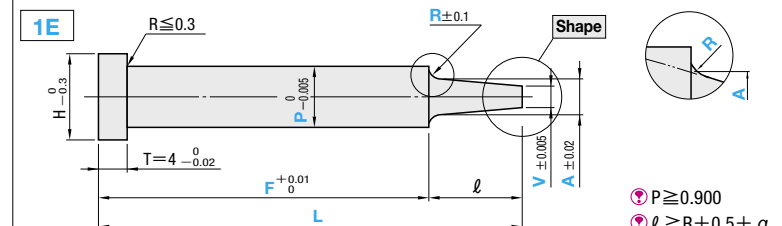
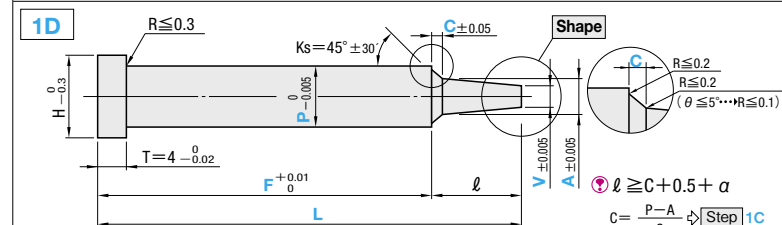
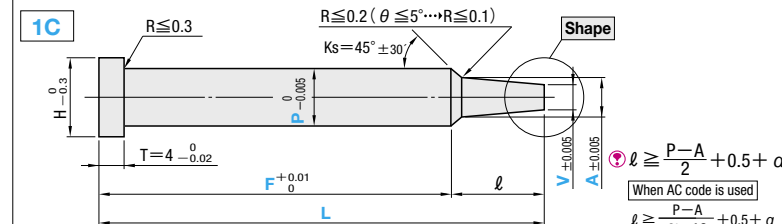
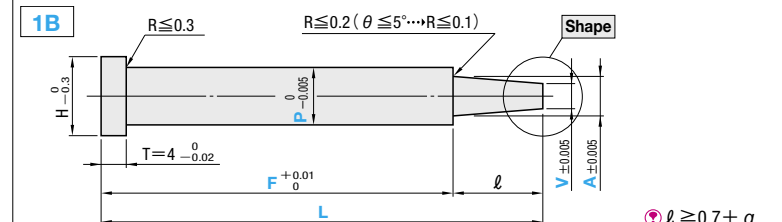
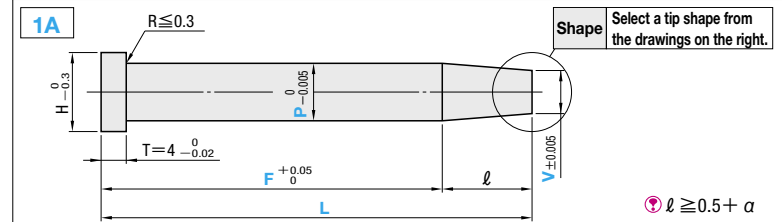


Ⓜ Non JIS material definition is listed on P.1351 - 1352

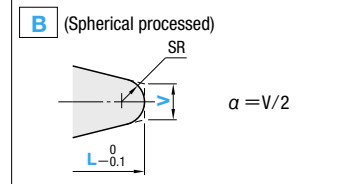
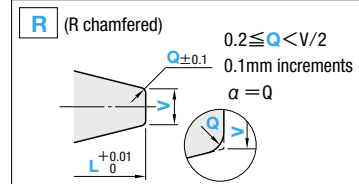
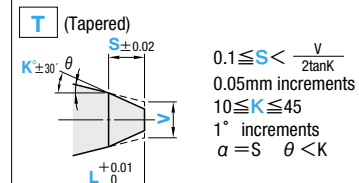
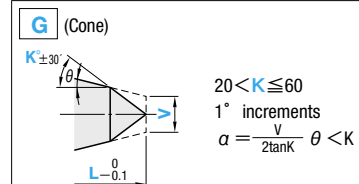
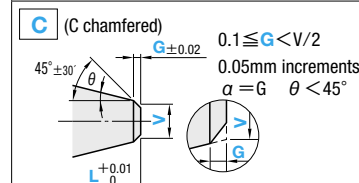
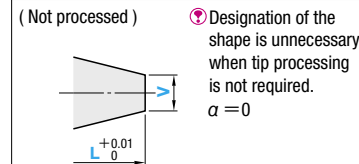
Ⓜ When exceeds the working limit of tip (ℓ) dimension (Refer to the step drawing lower right) → Details of the tip (ℓ) short type Ⓜ P.453

RoHS	M	Part Number		
		Type	Step	Shape
SKD61 equivalent 48~52HRC	CPZB—	1A	Not processed	
		1B	C	
		1C	G	
SKH51 equivalent 58~60HRC	CPVB—	1D	T	
		1E	R	
			B	

Step type selected from 1A~1E below



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



(Calculation of tip gradient θ Ⓜ P.1315)

H	Part Number			0.01mm increments		0.005mm increments		0.01mm increments		0.1mm increments		ℓmax.		
	Type	Step	Shape	min.	max.	min. P max.	min.	max.	F	A	Vmin.		C	R
3	CPZB—	1A	Designation is unnecessary when tip processing is not required.	1	100.00	0.800~	14.00	0.995	12.00	L-ℓmin. Refer to the [Step] drawing	P > A ≥ V [Step] 1A P > V No designation necessary for A	0.5	Only [Step] 1D designated	Only [Step] 1E designated
4				1.5		1.000~		1.495						
5				2		1.500~		1.995						
6				2.5		2.000~		2.495						
7				3		2.500~		2.995						
8				3.5		3.000~		3.495						
9	CPVB—	1B	Designation is unnecessary when tip processing is not required.	4	120.00	3.500~	14.00	3.995	12.00	L-ℓmin. Refer to the [Step] drawing	P > A ≥ V [Step] 1A P > V No designation necessary for A	1.00	Only [Step] 1D designated	Only [Step] 1E designated
10				4.5		4.000~		4.495						
11				5		4.500~		4.995						
15				5.5		5.000~		5.495						
18				6		5.500~		5.995						
21				6.5		6.000~		6.495						
25	CPVB—	1C	Designation is unnecessary when tip processing is not required.	7	150.00	6.500~	14.00	6.995	12.00	L-ℓmin. Refer to the [Step] drawing	P > A ≥ V [Step] 1A P > V No designation necessary for A	1.50	Only [Step] 1D designated	Only [Step] 1E designated
22				7.5		7.000~		7.495						
23				8		7.500~		7.995						
24				8		8.000~		8.495						
25				10		10.000~		12.995						
25				16		13.000~		15.995						
25	CPVB—	1D	Designation is unnecessary when tip processing is not required.	20	30.00	16.000~	14.00	19.995	12.00	L-ℓmin. Refer to the [Step] drawing	P > A ≥ V [Step] 1A P > V No designation necessary for A	2.00	Only [Step] 1D designated	Only [Step] 1E designated
25				20		16.000~		19.995						
25				20		16.000~		19.995						
25				20		16.000~		19.995						
25				20		16.000~		19.995						
25				20		16.000~		19.995						

Ⓜ [Step] 1E for No.1 (P ≥ 0.900)

Order

Part Number	L	P	F	A	V	C · R	Tip size (K · S · G · Q)
CPZB-1A 5	42.00	P4.650	F36.50		V3.80		K45
CPZB-1C G6	45.50	P5.680	F37.50	A5.00	V4.50		K45
CPZB-1DR5.5	52.60	P5.480	F41.10	A4.90	V4.60	C0.2	Q0.5

Days to Ship

Alterations

Part Number	L	P	F(FC)	A	V(VC)	C(CVC) · R	Tip size (K · S · G · Q)	(K · C · WKC...etc.)
CPZB-1A 5	42.00	P4.650	F36.50		V3.80	CVC0.25		KC2.4
CPVB-1DC6	51.00	P5.755	F40.05	A3.20	V3.05		G0.6	HCB Alteration details Ⓜ P.441

Alterations	Code	Spec.	1Code
	KC	Single flat cutting P/2 ≤ KC < H/2	
	WKC	Two flats cutting P/2 ≤ WKC < H/2	About Designation Unit for Key Flat Cutting
	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 [Unit of designation] 0.0025mm increments possible
	RKC	Two flats (right angled) cutting P/2 ≤ RKC < H/2	
	DKC	Three flats cutting P/2 ≤ DKC < H/2	
	SKC	Four flats cutting P/2 ≤ SKC < H/2	(2) To designate arbitrary key flat dimensions [Unit of designation] 0.1mm
	KGC	Two flats (angled) cutting P/2 ≤ KGC < H/2 0 < AG < 360 AG = 1° increments	
	KTC	Three flats cutting at 120° P/2 ≤ KTC < H/2	
	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	
	TC	Head thickness change TC = 0.1mm increments 1.5 ≤ TC < 4 (Dimensions L and F remain unchanged.) 4 - TC ≤ Lmax. - L	

Alterations	Code	Spec.	1Code
	TRN	Relief under the head (No need for plate chamfering)	
	NHC	Numbering on the head How to order Ⓜ P.442 Ⓜ Available when H ≥ 2 Ⓜ Combination with SKC not available.	
	AC	Changes the standard angle (Ks = 45°) AC = 1° increments Ⓜ Available for [Step] 1C/1D Ⓜ 30 ≤ AC ≤ 60 Ⓜ Combination with CVC not available. Ⓜ When [Step] 1D, C ≤ 1.0, A + 2(C × tan AC) < P	
	CVC	C dimension can be designated at 0.01mm increments. Ⓜ 0.10 ≤ CVC ≤ 1.00 Ⓜ Available for [Step] 1D Ⓜ CVC < (P - A) / 2 Ⓜ Combination with AC not available.	
	VC	Vmin. is enlarged. VC = 0.01mm increments Ⓜ ℓ ≤ A × 5, ℓ ≤ 50 (P × 5 for [Step] 1A) Ⓜ P > A ≥ VC Ⓜ Regarding No. = 2, 3, 4, 5 and 13~16, Vmin. is the machining limit, and VC cannot be used.	
	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 P ≥ 2.00 Ⓜ 2 ≤ GS ≤ 10 GS + 2 ≤ GB ≤ 30 Fmin. ≤ F - GB How to order Ⓜ P.442	

Ⓜ For details of a Gas Release Core Pin, which is a product similar to alteration GVC, Ⓜ P.471