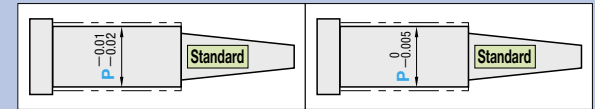


ONE-STEP CORE PINS

—SHAFT DIAMETER(P)DESIGNATION(0.01mm INCREMENTS) · SHAFT DIAMETER TOLERANCE $\frac{0.01}{0.02}$ / $\frac{0}{0.005}$ TYPE—



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

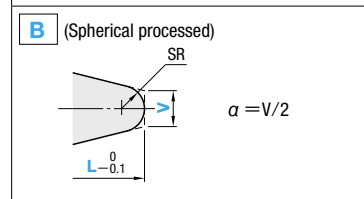
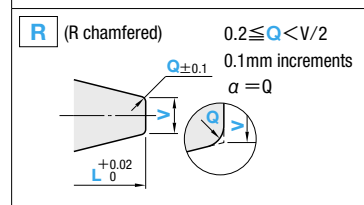
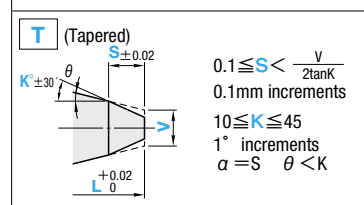
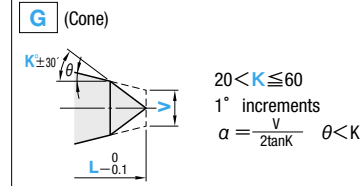
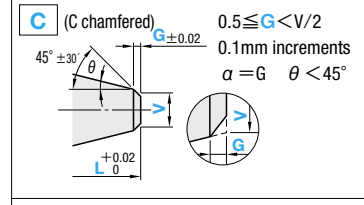
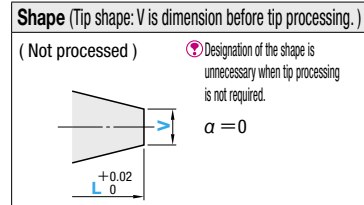
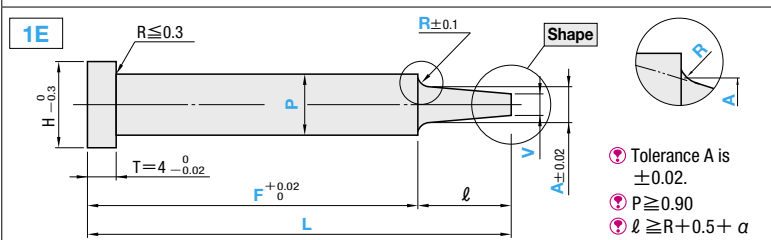
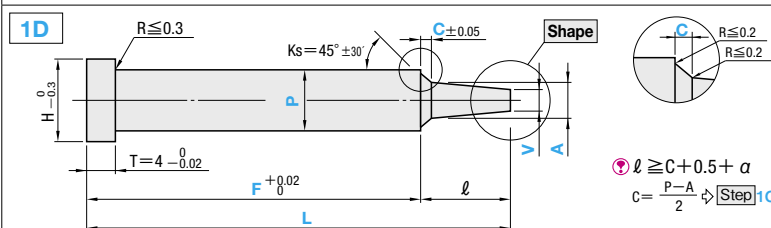
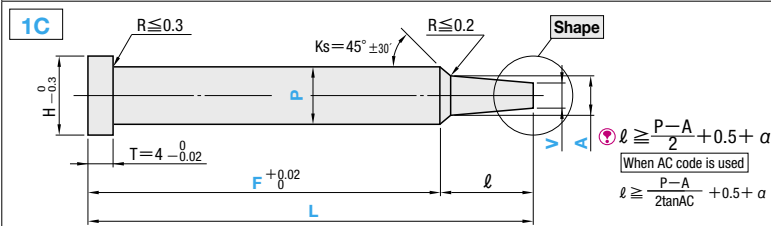
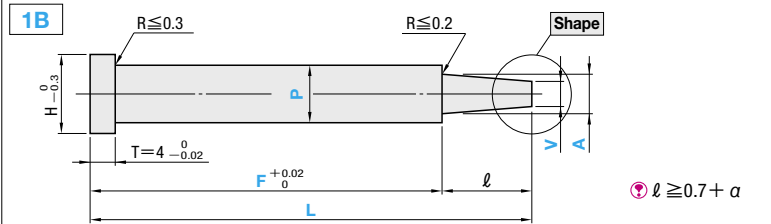
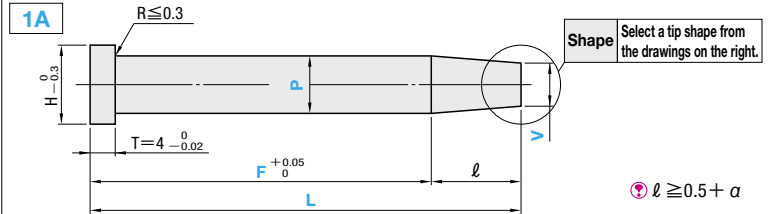
☉ When exceeds the size of tip (ℓ) dimension (Refer to lower right on the step drawing) → Details of the tip (ℓ) short type **P.447 · 453**

M	H	Type		Step	Shape
		Shaft diameter tolerance D	Shaft diameter tolerance D		
NAK80	37~43HRC	$\frac{0.01}{0.02}$	$\frac{0}{0.005}$		Not processed
DH2F	38~42HRC	$\frac{0.01}{0.02}$	$\frac{0}{0.005}$	1A	C
SKD61 equivalent	48~52HRC	$\frac{0.01}{0.02}$	$\frac{0}{0.005}$	1B	G
SKH51 equivalent	58~60HRC	$\frac{0.01}{0.02}$	$\frac{0}{0.005}$	1C	T
SUS440C	56~60HRC	$\frac{0.01}{0.02}$	$\frac{0}{0.005}$	1D	R
MAS1C	50~54HRC	$\frac{0.01}{0.02}$	$\frac{0}{0.005}$	1E	B
STAMAX ESP [®]	50~54HRC	$\frac{0.01}{0.02}$	$\frac{0}{0.005}$		
PROVA400	50~54HRC	$\frac{0.01}{0.02}$	$\frac{0}{0.005}$		

☉ STAMAX ESP[®] is a registered trademark of UDDEHOLM TOOL CO.
☉ PROVA400 is equivalent to SUS420J2 upgrading steel from Fujikoshi. Features **P.405**

☉ When [Step] 1E, A tolerance is ± 0.02 .

Step type selected from 1A~1E below



(Calculation of tip gradient θ **P.1315**)

H	Part Number		0.01mm increments				0.1mm increments				lmax.		
	Type	Step	Shape	No.	L min.	L max.	F min.	F max.	A	Vmin.		C	R
3	CPNB—CPKB—		1A	1									15.00
4	CPFB—CPGB—		1A	2									20.00
5	CPDB—CPPB—		1A	3									25.00
6	CPXB—CPHB—		1A	4									30.00
7	CPWB—CPYB—		1B	5									35.00
8	CPTHB—CPEHB—		1C	6									40.00
9	CPQB—CPRB—		1C	7									45.00
10	CPWB—CPYB—		1D	8									50.00
11	CPAB—CPYB—		1E	9									55.00
15	CPTHB—CPEHB—			10									60.00
18	CPTHB—CPEHB—			11									65.00
21	CPQB—CPRB—			12									70.00
25	CPQB—CPRB—			13									75.00
				14									80.00
				15									85.00
				16									90.00
				17									95.00
				18									100.00
				19									105.00
				20									110.00

☉ Step 1E for No.1 ($P \geq 0.90$)

Order

Part Number	L	P	F	A	V	C · R	Tip size (K · S · G · Q)
CPNB—1A 5	58.00	P4.95	F40.00	A5.00	V4.50		G1.5
CPXB—1CC5.5	45.50	P5.49	F30.50	A5.00	V4.50		G1.5
CPWB—1ET5	30.00	P4.86	F20.00	A2.80	V2.50	R0.5	K30—S1

Days to Ship

Quotation

Price

Quotation

Alterations

Part Number	L	P	F	A	V(VC)	C(CVC)	R(RE)	Tip size (K · S · G · Q)	(KC · WKC · etc.)
CPXB—1EC6	50.00	P5.70	F40.00	A5.00	V3.10		RE1.5	G1.0	HC8.0
CPGB—1A 5	58.00	P4.60	F50.00	A5.00	V4.40				NHC—23

Alteration Details **P.441**

Alterations	Code	Spec.	1Code	Alterations	Code	Spec.	1Code
	KC	Single flat cutting $P/2 \leq KC < H/2$			TC	Head thickness change TC=0.1mm increments 1.5≤TC<4 (Dimensions L and F remain unchanged.) 4—TC≤Lmax.—L	
	WKC	Two flats cutting $P/2 \leq WKC < H/2$	About Designation Unit for Key Flat Cutting		TRN	Relief under the head (No need for plate chamfering)	
	KAC KBC	Varied width parallel flats cutting $P/2 \leq KAC < H/2$ KBC=0.1mm increment $KAC < KBC < H/2$			NHC	Numbering on the head How to order P.442 ☉ Available when H≥2 ☉ Combination with SKC not available.	
	RKC	Two flats (right angled) cutting $P/2 \leq RKC < H/2$	(1) To align the key flat with the shaft diameter Unit of designation 0.005mm increments possible		RR	Changes R (normally 0.2 or less) to R0.3~0.5. (Strength has been improved) [Designation method] RR ☉ Available for [Step] 1B/1C/1D ☉ P—A≥1.0 When [Step] 1D, C≥0.5	
	DKC	Three flats cutting $P/2 \leq DKC < H/2$			AC	Changes the standard angle (Ks=45°) AC=1° increments ☉ Available for [Step] 1C/1D ☉ 30≤AC≤60 ☉ Combination with CVC · RR not available ☉ When [Step] 1D, C≤1.0A+2(C×tanAC)<P	
	SKC	Four flats cutting $P/2 \leq SKC < H/2$			CVC	C dimension can be designated at 0.01mm increments. ☉ 0.50≤CVC≤1.00 ☉ Available for [Step] 1D ☉ CVC<(P—A)/2 ☉ Combination with AC not available.	
	KGC	Two flats (angled) cutting $P/2 \leq KGC < H/2$ 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 ☉ ℓ≤X×5, ℓ≤50 (P×5 for [Step] 1A) ☉ P>A≥VC ☉ Regarding No=2~3, 4.5, 5 and 13~16, Vmin. is the machining limit, and VC cannot be used.	
	KTC	Three flats cutting at 120° $P/2 \leq KTC < H/2$			RE	R shape alteration (enlargement) RE=0.5mm increments ☉ 0.5≤RE≤2.0 ☉ F tolerance is +0.05 ☉ Available for [Step] 1E	
	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 Fmin.≤F—GB How to order P.442	
	HCC	Head diameter change (precision) HCC=0.1mm increments P+0.5≤HCC<H—0.3					

☉ For details of a Gas Release Core Pin, which is a product similar to alteration GVC, **P.469**