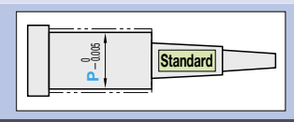
TWO- STEP CORE PINS

—SHAFT DIAMETER (P) DESIGNATION (0.01mm INCREMENTS) • SHAFT DIAMETER TOLERANCE $-^{0}_{0.005}$ TYPE—



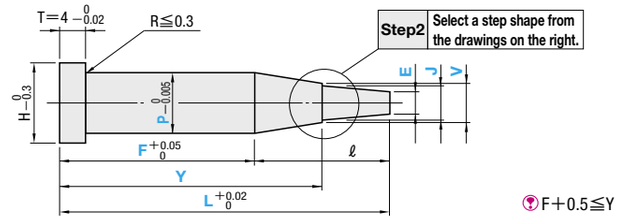
When exceeding the machining limit of tip (ℓ) dimension (Refer to the following drawings Step1 • Step2)···▸ "Tip (ℓ) Short two-step Core Pins" **Details are published online.**

RoHS

Part Number			
Step 1	Material code	M H	Step 2
CA	KB	NAK80 37～43HRC	A
CB	GB	DH2F 38～42HRC	B
CC	PB	SKD61 equivalent 48～52HRC	C
CD	HB	SKH51 equivalent 58～60HRC	D
CE	WB	SUS440C 56～60HRC	E
	YB	MAS1C 50～54HRC	

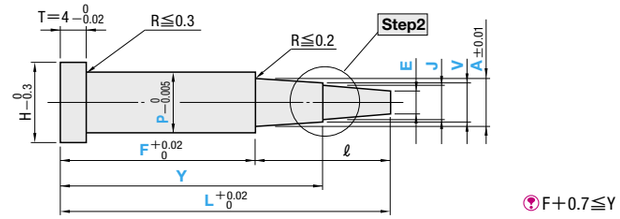
Step1 (shape for first step) select from CA～CE below

CA



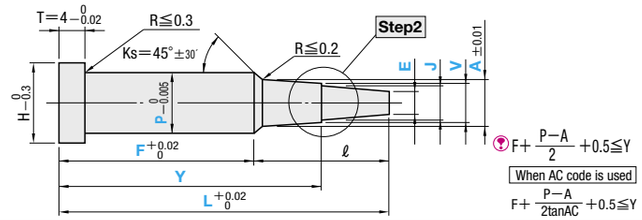
F+0.5≦Y

CB



F+0.7≦Y

CC

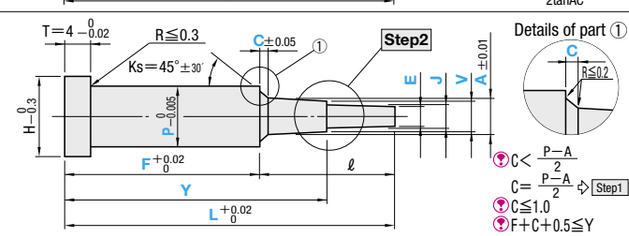


$F+\frac{P-A}{2}+0.5\leqq Y$

When AC code is used

$F+\frac{P-A}{2\tan AC}+0.5\leqq Y$

CD



Details of part ①

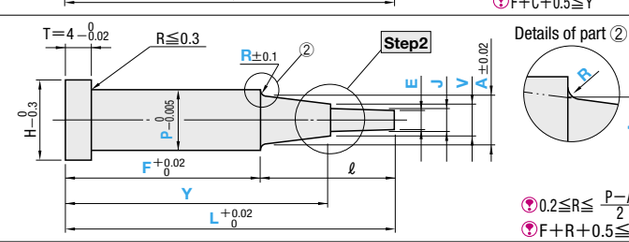
$C<\frac{P-A}{2}$

$C=\frac{P-A}{2}$ ⇨ Step1 CC

C≦1.0

F+C+0.5≦Y

CE



Details of part ②

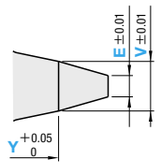
$0.2\leqq R\leqq\frac{P-A}{2}$

F+R+0.5≦Y

Step2 (shape for second step)

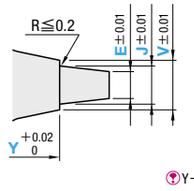
A

(Designation of V=Epossible)



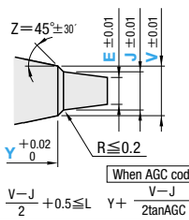
Y+0.5≦L

B



Y+0.7≦L

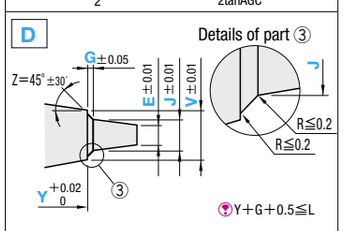
C



When AGC code is used

$Y+\frac{V-J}{2}+0.5\leqq L$ $Y+\frac{V-J}{2\tan AGC}+0.5\leqq L$

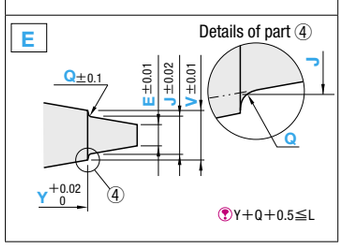
D



Details of part ③

Y+G+0.5≦L

E



Details of part ④

Y+Q+0.5≦L

Refer to the Step2 drawing for Y tolerance

"MAS1C" will be discontinued when stocked materials are finished.

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

H	Part Number				0.01mm increments									0.1mm increments				ℓmax.
					L													
	Step1	Material	Step2	No.	min.	max.	min. P max.	F	Y	A	V	J	Emin.	C	R	G	Q	
3				1.5			1.00～ 1.49						0.50					20.00
4				2			1.50～ 1.99						0.70					25.00
5	CA	KB	A	2.5		100.00	2.00～ 2.49											30.00
6				3			2.50～ 2.99						1.00					35.00
7	CB	GB	B	3.5			3.00～ 3.49											40.00
		PB		4		120.00	3.50～ 3.99			P>A≧V	A≧V>J	V>J≧E						45.00
8	CC	HB	C	4.5			4.00～ 4.49			When Step1 CA is selected, no designation is necessary for A.	When Step1 CA is selected, P>V>J	When Step2 A is selected, no need to designate J.	1.50	Only Step1 CD is designated	Only Step1 CE is designated	Only Step2 D is designated	Only Step2 E is designated	
				5			4.50～ 4.99	F≧10.00	Refer to the working limits shown in the drawing									
9	CD	WB	D	5.5	12.00		5.00～ 5.49							0.1≦C≦1.0 and C< (P−A)/2	R≧0.2 and R≦ (P−A)/2	G≧0.5 and G< (V−J)/2	Q≧0.2 and Q≦ (V−J)/2	
				6		120.00	5.50～ 5.99				When Step2 A is selected, V=E possible.							
10	CE	YB (P≦3.99)	E	6.5			6.00～ 6.49						2.00					
				7			6.50～ 6.99											
11				8		Only C□HB□ 150.00	7.00～ 7.99											60.00
15				10			8.00～ 9.99											
18				13			10.00～12.99						2.50					
21				16			13.00～15.99											
25		PB HB		20	30.00		16.00～19.99	F≧28.00					5.00					

Order

Part Number	L	P	F	Y	A	V	J	E	C・R	G・Q
CBHBB 6	62.10	P5.55	F42.00	Y53.25	A5.20	V4.70	J4.10	E3.50		
CDWBA 8	70.00	P7.25	F43.50	Y55.32	A5.00	V4.50		E4.00	C0.5	
CEPBE 6	55.75	P5.98	F43.50	Y48.76	A5.00	V4.80	J3.80	E3.00	R0.4	Q0.4

Days to Ship **Quotation**

Price **Quotation**

Alterations

Part Number	L	P	F	Y	A	V	J	E	C・R	G・Q	(KC・WKC···etc.)
CEGBA5	56.50	P4.80	F48.00	Y52.00	A4.20	V4.10		E2.80	R0.3		RKC2.4

Alteration details P.441

Alterations	Code	Spec.	1Code
KC −0 −0.01	KC	Single flat cutting P/2≦KC<H/2	
WKC −0 −0.01	WKC	Two flats cutting P/2≦WKC<H/2	
KAC KBC −0 −0.01	KAC KBC	Varied width parallel flats cutting P/2≦KAC<H/2 KBC=0.1mm increments only KAC<KBC<H/2	
RKC −0 −0.01	RKC	Two flats (right angled) cutting P/2≦RKC<H/2	Quotation
DKC −0 −0.01	DKC	Three flats cutting P/2≦DKC<H/2	
SKC −0 −0.01	SKC	Four flats cutting P/2≦SKC<H/2	
AG° ±0.5 0° KGC −0 −0.01	KGC	Two flats (angled) cutting P/2≦KGC<H/2 0<AG<360 AG=1° increments	
120° 120° −0 −0.01	KTC	Three flats cutting at 120° P/2≦KTC<H/2	

About Designation Unit for Key Flat Cutting

(1)To align the key flat with the shaft diameter

Unit of designation 0.005mm increments possible

(2)To designate arbitrary key flat dimensions

Unit of designation 0.1mm

Alterations	Code	Spec.	1Code
H HC −0 −0.3	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.	
H HCC −0 −0.02	HCC	Head diameter change (precision) HCC=0.1mm increments P+0.5≦HCC<H−0.3	
TC −0 −0.02 4	TC	Head thickness change TC=0.1mm increments 1.5≦TC<4 (Dimensions L, Y, and F remain unchanged) 4−TC≦Lmax.−L	
	TRN	Relief under the head (No need for plate chamfering)	Quotation
A15 8	NHC	Numbering on the head How to order P.442 Available when H≧2 Combination with SKC not available.	
AC°	AC	Changes the standard angle(Ks=45°). AC=1° increments Available for Step1 CC/CD 30≦AC≦60 When Step1 CD : A+2(C×tanAC)<P	
AGC°	AGC	Changes the standard angle (Z=45°). AGC=1° increments Available for Step2 C/D 30≦AGC≦60 When Step2 D : J+2(G×tanAGC)<V	
F GB GS	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	