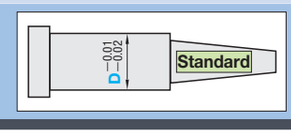
Dies Steel
SKD61 equivalent+Nitrided
D$^{-0.01}_{-0.02}$

ONE-STEP CENTER PINS

—SHAFT DIAMETER (D) SELECTION TIP (A・V) TOLERANCE : ±0.01／±0.02 TYPE—



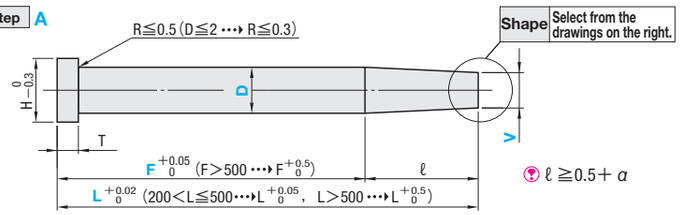
Non JIS material definition is listed on P.1351 - 1352

M SKD61 equivalent+Nitrided
H Surface 900HV
Base material 40~45HRC
Range of guaranteed shaft diameter precision (Details P.1305) Range of guaranteed surface hardness for nitriding (Details P.1308)
Range of guaranteed base material hardness (Details P.1307) No nitriding on the tip (ℓ).

Type	T D	Head Thickness (T)	T Head Thickness (T)	Applicable ejector sleeve hole tolerance
CPN—5	$^{-0.01}_{-0.02}$ D 12 or L>500 ⋯ $^{-0.01}_{-0.03}$	4mm (T4)	$^{0}_{-0.02}$ (L>300 ⋯ $^{0}_{-0.05}$)	$^{+0.01}_{0}$ or H7
CPNK—5				
CPJ—5		4・6・8mm(JIS)	$^{0}_{-0.05}$	Details P.1309
CPJK—5				

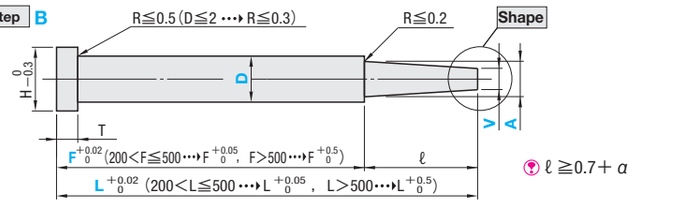
Step (Step type) Select from A～E in the drawings below

Step A



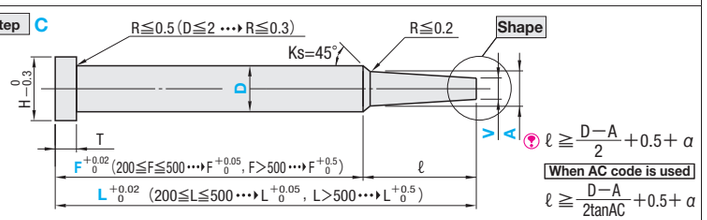
ℓ ≧0.5+ α

Step B



ℓ ≧0.7+ α

Step C

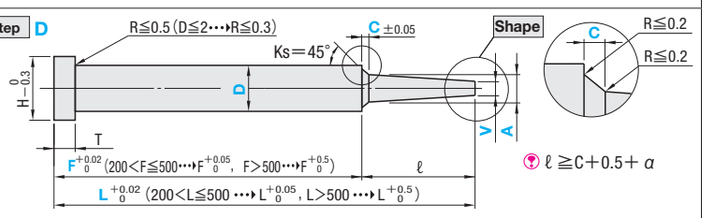


ℓ ≧ $\frac{D-A}{2}$ +0.5+ α

When AC code is used

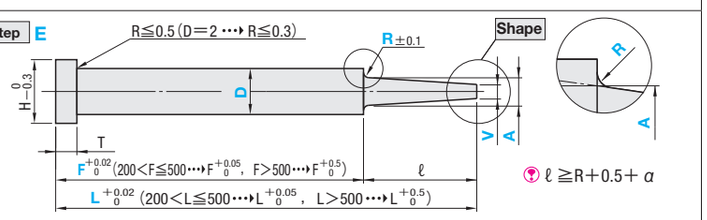
ℓ ≧ $\frac{D-A}{2tanAC}$ +0.5+ α

Step D



ℓ ≧C+0.5+ α

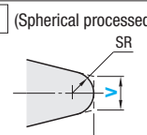
Step E



ℓ ≧R+0.5+ α

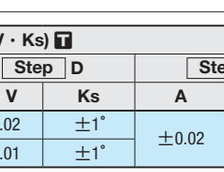
Shape (Tip shape : V is dimension before tip processing.)

(Not processed) Designation of the shape is unnecessary when tip processing is not required.



α =0

C (C chamfered) 0.5≦G<V/2



0.1mm increments
α =G θ <45°
(Calculation of θ P.1315)

G (Cone)

20<K≦60
1° increments
α = $\frac{V}{2tanK}$ θ <K
(Calculation of θ P.1315)

T (Tapered)

0.1≦S< $\frac{V}{2tanK}$
0.1mm increments
20<K≦45
1° increments
α =S θ <K
(Calculation of θ P.1315)

R (R chamfered) 0.2≦Q<V/2

0.1mm increments
α =Q

B (Spherical processed)

α =V/2

Group	Type		Step (Step type A・V・Ks) T							
			Step A	Step B	Step C		Step D		Step E	
	4mm head	JIS head	V	A・V	A・V	Ks	A・V	Ks	A	V
Standard	CPN—5□	CPJ—5□	±0.02	±0.02	±0.02	±1°	±0.02	±1°	±0.02	±0.02
	CPNK—5□	CPJK—5□	±0.01	±0.01	±0.01	±1°	±0.01	±1°		±0.01

4mm head H	4mm head T	JIS head H	JIS head T	Part Number Type 4mm head	Part Number Type JIS head	Part Number Step	Part Number Shape	D	L 0.01mm increments (L>500 ⋯ 0.1mm increments)	0.01mm increments F	0.01mm increments A	0.01mm increments Vmin.	0.1mm increments C・R	ℓ max.
3	4	3	4	CPN—5 CPNK—5	CPJ—5 CPJK—5	A B C D E	Designation is unnecessary when tip processing is not required. C G T R B	1.5	70.00～200.00	F≧50.00	D>A≧V No need to designate A when Step A is selected.	0.50	Step D only 0.1≦C≦1.5 and C<$\frac{D-A}{2}$ Step E only R≧0.3 and R≦$\frac{D-A}{2}$	20
4		4						2	70.00～400.00			0.70		25
5		5						2.5						30
6		6						3	70.00～400.00 (500.00)			1.00		35
7		7						3.5						40
8		8	6					4	70.00～400.00 (700.00)			1.50		45
								4.5						50
9		9						5						
		10						5.5	70.00～500.00			2.00		
10		11						6	70.00～500.00 (700.00)					
								6.5						
11		13	8					7	70.00～500.00 (800.00)					
14		14						8						
15		15						9						
17		17						10						
								12						
—	—	20		—				15						
		21						16				2.50		

Step E is D≧2 L dimension designation in ( ) is only available for CPJ—5, CPJK—5. Refer to the drawing for ℓ min. (normally, α =0)

Order

Part Number	L	F	A	V	C(R)	Tip size (K・S・G・Q)
CPJ—5ER 6	350.00	F330.00	A5.00	V4.00	R0.5	Q1.5

Days to Ship: Quotation

Alterations

Part Number	L	F	A	V	C(R)	Tip size (K・S・G・Q)	(KC・WKC⋯etc.)
CPJ—5ER 6	350.00	F330.00	A5.00	V4.00	R0.5	Q1.5	KC3.0

Alteration details P.351

Alterations	Code	Spec.	1Code
KC 0 −0.1	KC	Single flat cutting D/2≦KC<H/2	Quotation
WKC 0 −0.1	WKC	Two flats cutting D/2≦WKC<H/2	
KAC KBC 0 −0.1	KAC KBC	Varied width parallel flats cutting D/2≦KAC<H/2 KBC=0.1mm increments only KAC<KBC<H/2	
RKC RKC 0 −0.1	RKC	Two flats (right angled) cutting D/2≦RKC<H/2	
DKC DKC DKC 0 −0.1	DKC	Three flats cutting D/2≦DKC<H/2	
AG° ±0.5 0° KGC 0 −0.1	KGC	Two flats (angled) cutting D/2≦KGC<H/2 AG=1° increments 0<AG<360	
120° 120° 120° KTC 0 −0.1	KTC	Three flats cutting at 120° D/2≦KTC<H/2	
H HC 0 −0.3	HC	HC=0.1mm increments D≦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	HCC=0.1mm increments D+1≦HCC<H−0.3	

About Designation Unit for Key Flat Cutting

(1)To align the key flat with the shaft diameter
Unit of designation 0.05mm increments possible

(2)To designate arbitrary key flat dimensions
Unit of designation 0.1mm

Alterations	Code	Spec.	1Code
TC 0 −0.05	TC	TC=0.1mm increments T/2≦TC<T T−TC≦Lmax.−L (Dimensions L and F remain unchanged.)	Quotation
H d +0.1 0 ℓ T	NC	Dowel hole boring Combination with other than NHC・NHN・AC・RR not available. (T 4 d 2 ℓ 3; 6 3 5; 8 5)	
H d ℓ1 T	NCW	Dowel hole boring+Spring pin driving Combination with other than NHC・NHN・AC・RR not available. (T 4 d 2 ℓ1 5; 6 3 5; 8 5)	
217	NHC	Numbering on the head How to order P.352 Available when H≧2	
1 2 3	NHN	Automatic sequential numbering on the head How to order P.352 Available when H≧2	
AC°	AC	Changes the standard angle (Ks=45°). AC=1° increments 30≦AC≦60 Available for Step C・D Combination with RR not available. When Step D, C≦1.0, A+2(C×tanAC°)<D	
RR	RR	Changes R (normally 0.2 or less) to R0.3～0.5. (for strength improvement) Designation method RR Available for Step B・C・D D−A≧1.0 When Step D, C≧0.5	

Price: Quotation

Stepped Center Pins

Dies Steel SKD61 equivalent + Nitrided