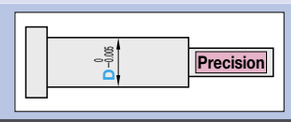
PRECISION TAPERLESS ONE-STEP CORE PINS (NO DRAFT ANGLE CORE PINS)

—SHAFT DIAMETER (D) SELECTION TYPE—



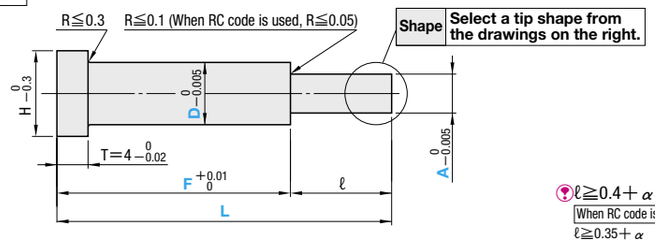
Non JIS material definition is listed on P.1351 - 1352

RoHS

M H	Part Number Type	Step	Shape
SKD61 equivalent 48～52HRC	CPZS—	B	S
		C	C
		D	G
		E	T
SKH51 equivalent 58～60HRC	CPVS—		R
			B

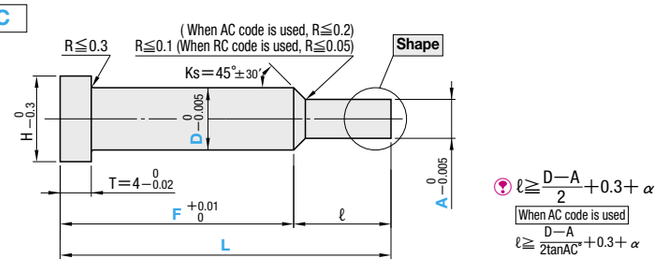
Step (Step type) Select from B～E in the drawing below.

B



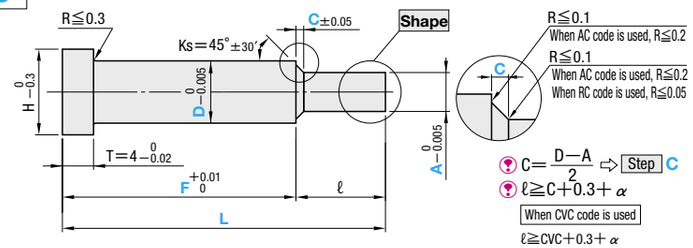
ℓ≧0.4+α
When RC code is used
ℓ≧0.35+α

C



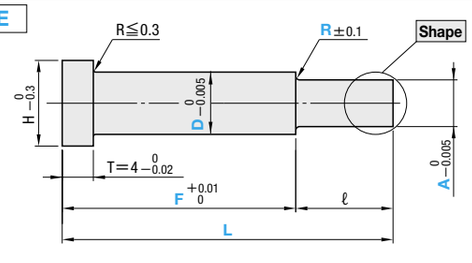
ℓ≧(D−A)/2+0.3+α
When AC code is used
ℓ≧(D−A)/(2tanAC°)+0.3+α

D



C=(D−A)/2 ⇨ Step C
ℓ≧C+0.3+α
When CVC code is used
ℓ≧CVC+0.3+α

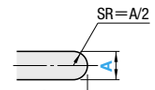
E



ℓ≧R+0.3+α

Shape (Tip shape)

S (Not processed)



α=0

C (C chamfering)

0.1≦G<A/2
0.05mm increments
α=G

G (Cone)

20<K≦60
1° increments
α=A/2tanK

T (Tapered)

0.1≦S<A/2tanK
0.05mm increments
0<K≦45
1° increments
α=S

R (R chamfering)

0.2≦Q<A/2
0.1mm increments
α=Q

B (Spherical processed)

α=A/2

H	Part Number Type	Step	Shape	D	0.01mm increments L min.	L max.	F min.	F max.	A min.	A max.	0.1mm increments C	0.1mm increments R	ℓ max.
3	CPZS—	B	S	1	14.00	100.00	12.00	L−ℓ min. ℓmin. Refer to Step drawing	0.50	D>A	Only Step D is designated. C<(D−A)/2 and 0.1≦C≦4.0	Only Step E is designated. R≦(D−A)/2 and R≧0.2	ℓ≦12×A and ℓ≦35
4				1.5									
5				2									
6				2.5					0.70				
7		C	C	3		120.00			1.00				
8			G	3.5									
9		D	T	4					1.50				
10	CPVS—	E	R	4.5		120.00			2.00				
11			B	5		CPVS only 150.00							
15				5.5									
18				6									
21				6.5									
25				7									
				8									
				10									
				13									
				16									
				20	30.00		28.00		5.00				

Order

Part Number	L	F	A	C・R	Tip size (K・S・G・Q)
CPZS—BS4	45.55	F40.00	A3.50		
CPVS—CC6	52.30	F42.50	A4.60	—	G1.0
CPZS—DG5	48.62	F37.55	A4.00	C0.2	K30
CPVS—ER6.5	55.65	F42.35	A4.50	R0.5	Q0.5

Days to Ship: Quotation

Price: Quotation

Alterations

Part Number	L	F(FC)	A(AAC)	C(CVC)・R	K・S・G・Q	(KC・WKC…etc.)
CPVS—DC6	65.00	F55.00	A3.50	C0.5	G0.5	RC KC3.0
CPVS—DS5	50.00	F38.00	A2.00	C0.3		TRN

Alteration details P.495

Alterations	Code	Spec.	1Code
KC 0 −0.01	KC	Single flat cutting D/2≦KC<H/2	
WKC 0 −0.01	WKC	Two flats cutting D/2≦WKC<H/2	
KAC KBC 0 −0.01	KAC KBC	Varied width parallel flats cutting D/2≦KAC<H/2 KBC=0.1mm increments only KAC<KBC<H/2	
RKC 0 −0.01	RKC	Two flats (right angled) cutting D/2≦RKC<H/2	
DKC 0 −0.01	DKC	Three flats cutting D/2≦DKC<H/2	
SKC 0 −0.01	SKC	Four flats cutting D/2≦SKC<H/2	
AG° ±0.5 0° KGC	KGC	Two flats (angled) cutting D/2≦KGC<H/2 0<AG<360 AG=1° increments	
120° 120° 120° KTC 0 −0.01	KTC	Three flats cutting at 120° D/2≦KTC<H/2	
H HC 0 −0.3	HC	In case of D=2～3, 4.5, and 5, A min. is the machining limit, and AAC cannot be used. ℗ 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 D+0.5≦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

Quotation

Alterations	Code	Spec.	1Code
TC 0 −0.02 4	TC	Head thickness change TC=0.1mm increments 1.5≦TC<4 (Dimensions L and F remain unchanged) 4−TC≦Lmax.−L	
	TRN	Relief under the head (Makes plate chamfering unnecessary)	
A15 8	NHC	Numbering on the head How to order P.496 ℗ Available when H≧2 ⊗ Combination with SKC not available.	
AAC	AAC	Extends the working limit of A min. ℗ AAC= 0.01mm increments ℗ ℓ≦10×AAC	

D	A min.	AAC min.
1～1.5	0.50	0.40
3.5～4	1.00	0.70
5.5	1.50	1.00
6～16	2.00	1.50
20	5.00	4.00

⊗ In case of D=2～3, 4.5, and 5, Amin. is the machining limit, and AAC cannot be used.

45° RC	RC	Changes R (normally ≦0.1) to R≦0.05. Designation method RC ℗ Available for Step B/C/D	
45° CVC±0.02	CVC	C dimension can be designated at 0.01mm increments. 0.10≦CVC≦1.00 CVC=0.01mm increments ℗ Available for Step D	
AC°	AC	Changes the standard angle (Ks=45°). AC=1° increments ℗ Available for Step C・D ℗ 30≦AC≦60 ⊗ Combination with CVC/RC not available. ℗ When Step D, C≦1.0, A+2(C×tanAC°)<D	
FC F	FC	F dimension becomes shorter than F min, and L dimension becomes shorter than L min. FC≧5mm ℗ It can be designated up to L min.=6.5mm.	
GS F GB	GVC	Gas vent machining GS・GB=1mm increments ℗ Available when D≧2 ℗ 2≦GS≦10 GS+2≦GB≦30 F min.≦F−GB How to order P.496	

Quotation

℗ For details of a Gas Release Core Pin, which is a product similar to alteration GVC P.511

℗ Refer to the Shape drawing for L tolerance