PRECISION GAS RELEASE ONE-STEP CORE PINS

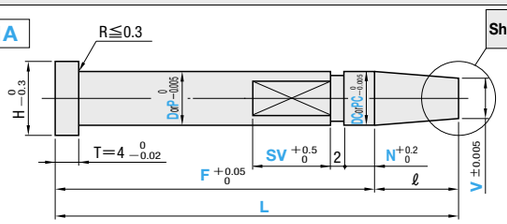
—SHAFT DIAMETER (D) SELECTION TYPE／SHAFT DIAMETER (P) DESIGNATION (0.005mm INCREMENTS) TYPE—

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

M H	Part Number: Type: Shaft diameter (D) selection type	Part Number: Type: Shaft diameter (P) designation type	Part Number: Step	Part Number: Shape
SKD61 equivalent 48～52HRC	GV−CPZ−	GV−CPZB−	1A 1B 1C 1D	Not processed C G T R B
SKH51 equivalent 58～60HRC	GV−CPV−	GV−CPVB−		

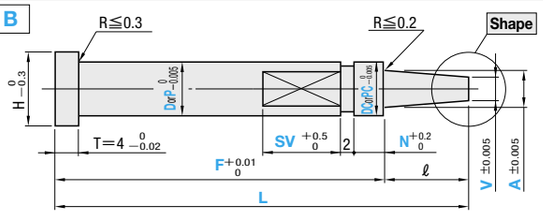
Step type selected from 1A～1D below

1A



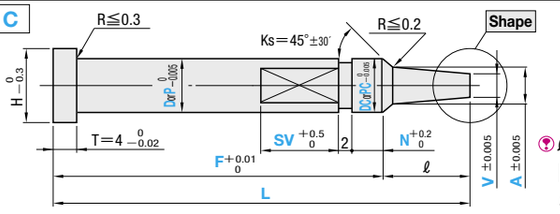
ℓ ≧0.5+ α

1B



ℓ ≧0.7+ α

1C

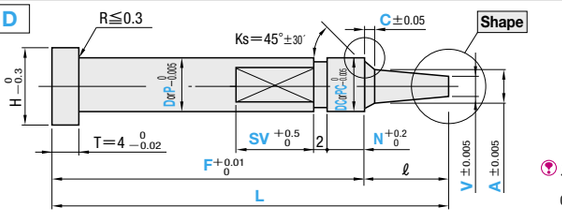


ℓ ≧ (DorP)−A / 2 +0.5+ α

When AC code is used

ℓ ≧ (DorP)−A / 2tanAC +0.5+ α

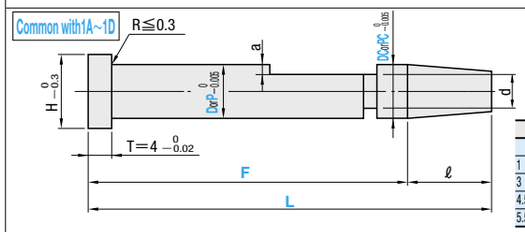
1D



ℓ ≧C+0.5+ α

C= (DorP)−A / 2 ⇨ Step 1C

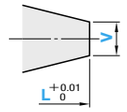
Common with1A～1D



D	P	d	a
—	0.800～ 0.995	P−0.1	0.05
1 ～ 2.5	1.000～ 2.495	(DorP)−0.2	0.1
3 ～ 4	2.500～ 3.995	(DorP)−0.4	0.2
4.5～ 5	4.000～ 4.995	(DorP)−0.6	0.3
5.5～13	5.000～12.995	(DorP)−1.0	0.5

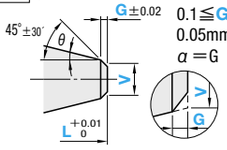
Shape (Tip shape: V is dimension before tip processing.)

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



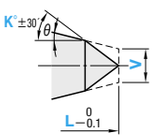
α =0

C (C chamfered)



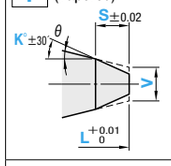
0.1≦G＜V/2
0.05mm increments
α =G θ ＜45°

G (Cone)



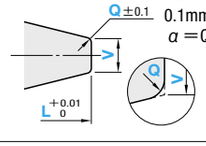
20＜K≦60
1° increments
α = V / 2tanK θ ＜K

T (Tapered)



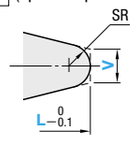
0.1≦S＜ V / 2tanK
0.05mm increments
10≦K≦45
1° increments
α =S θ ＜K

R (R chamfered)



0.2≦Q＜V/2
0.1mm increments
α =Q

B (Spherical processed)



α =V/2

(Calculation of tip gradient θ P.1315)

■Shaft diameter (D) selection type

H	Part Number: Type	Part Number: Step	Part Number: Shape	D	0.01mm increments: L	0.01mm increments: F	0.01mm increments: A	0.01mm increments: Vmin.	0.1mm increments: C	0.005mm increments: DC	0.1mm increments: N	0.5mm increments: SV	ℓmax.
3	GV−CPZ− GV−CPV−	1A 1B 1C 1D	Designation is unnecessary when tip processing is not required. C G T R B	1	16.50 ～ 100.00	14.50 ～ L−ℓmin.	DC＞A≧V Step 1A DC＞V No designation necessary for A	0.50	Only Step 1D designated C＜ D−A / 2 and ※0.1≦C≦4.0 ※When CVC code is used 0.10≦CVC≦1.00	(D−0.08)≦DC≦D When DC=D, DCX is applied.	0.3 ～ 10.0 F−(2+SV+N)≧10	2.0 ～ 50.0	A×6 Step 1A =D×6 and 50.00
4				1.5									
5				2				0.70					
6				2.5									
7				3									
8				3.5				1.00					
9				4									
10				4.5									
11				5									
15				5.5	16.50 ～ 120.00	ℓmin. Refer to the Step drawing	No designation necessary for A	1.50			0.5 ～ 15.0 F−(2+SV+N)≧10	2.0 ～ 60.0	
18				6									
				7									
				8				2.00					
				10									
				13									

■Shaft diameter (P) designation type

H	Part Number: Type	Part Number: Step	Part Number: Shape	No.	0.01mm increments: L	0.005mm increments: P	0.01mm increments: F	0.01mm increments: A	0.01mm increments: Vmin.	0.1mm increments: C	0.005mm increments: PC	0.1mm increments: N	0.5mm increments: SV	ℓmax.
3	GV−CPZB− GV−CPVB−	1A 1B 1C 1D	Designation is unnecessary when tip processing is not required. C G T R B	1	16.50 ～ 100.00	0.800～ 0.995	14.50 ～ L−ℓmin.	PC＞A≧V Step 1A PC＞V No designation necessary for A	0.50	Only Step 1D designated C＜ P−A / 2 and ※0.1≦C≦4.0 ※When CVC code is used 0.1≦CVC≦1.00	(P−0.08)≦PC≦P When PC=P, PCX is applied.	0.3 ～ 10.0 F−(2+SV+N)≧10	2.0 ～ 50.0	A×6 Step 1A =P×6 and 50.00
4				1.5		1.000～ 1.495								
5				2		1.500～ 1.995			0.70					
6				2.5		2.000～ 2.495								
7				3		2.500～ 2.995								
8				3.5		3.000～ 3.495			1.00					
9				4		3.500～ 3.995								
10				4.5		4.000～ 4.495								
11				5		4.500～ 4.995								
15				5.5	16.50 ～ 120.00	5.000～ 5.495	ℓmin. Refer to the Step drawing	No designation necessary for A	1.50		0.5 ～ 15.0 F−(2+SV+N)≧10	2.0 ～ 60.0	
18				6		5.500～ 5.995								
				7		6.000～ 6.995								
				8		7.000～ 7.995								
				10		8.000～ 9.995			2.00					
				13		10.000～12.995								

Order

Part Number	L	P	F	A	V	C	(Tip size) (K·S·G·Q)	DC(DCX) PC(PCX)	N	SV
GV−CPZ −1A 5	58.00		F40.00		V4.50			DC4.990	N2	SV10
GV−CPVB−1BR6	46.00	P5.500	F38.00	A5.00	V3.00		Q1.0	PCX	N4	SV15

Days to Ship Quotation

Price Quotation

Alterations

Part Number	L	P	F(FC)	A	V(VC)	C(CVC)	(Tip size) (K·S·G·Q)	DC(DCX) PC(PCX)	N	SV(SVC)	(KC・WKC…etc.)
GV−CPV −1BC6	50.00		F40.00	A5.00	V3.10		G1.0	DCX	N4	SV10	HC8.0
GV−CPZB−1A 5	58.00	P4.995	F50.00		V4.00			PC4.990	N2	SV15	NHC−23

Alteration details P.441

Alterations	Code	Spec.	1Code
KC−0.01	KC	Single flat cutting (D or P)/2≦KC＜H/2	Quotation
WKC−0.01	WKC	Two flats cutting (D or P)/2≦WKC＜H/2	
KAC KBC−0.01	KAC KBC	Varied width parallel flats cutting (D or P)/2≦KAC＜H/2 KBC=0.1mm increments only KAC＜KBC＜H/2	
H HC−0.3	HC	Head diameter change HC=0.1mm increments (D or 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−0.02	HCC	Head diameter change (precision) HCC=0.1mm increments (D or P)+0.5≦HCC＜H−0.3	
TC−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	

About Designation Unit for Key Flat Cutting
(1)To align the key flat with the shaft diameter
Unit of designation
Shaft diameter (D) selection type 0.05mm increments possible
Shaft diameter (P) designation type 0.0025mm increments possible
(2)To designate arbitrary key flat dimensions
Unit of designation 0.1mm

Alterations	Code	Spec.	1Code
	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	
AC°	AC	Changes the standard angle (Ks=45°) AC=1° increments Available for Step 1C/1D 30≦AC≦60 Combination with CVC not available. 1D, C≦1.0,A+2(C×tanAC)＜(D or P)	
CVC±0.02 45°	CVC	C dimension can be designated at 0.01mm increments. 0.10≦CVC≦1.00 Available for Step 1D CVC＜[(DorP−A)]/2 Combination with AC not available.	
VC	VC	Vmin. is enlarged. VC=0.01mm increments ℓ≦A×5,ℓ≦50 (Step 1A, (DorP)×5) (DC or PC)＞A≧VC	

D or No.	Vmin.	VCmin.
1～1.5	0.50	0.40
3.5～4	1.00	0.70
5.5	1.50	1.00
6～10	2.00	1.50

Regarding DorNo.=2～3, 4.5, 5 and 13, Vmin. is the machining limit, and VC cannot be used.

FC F	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.	
SVC	SVC	Extend the flat section SV to the bottom. When P＜1 ⋯▸Available for L=60 or less When used concurrently with key flat cutting, SVC processing is done perpendicularly to the key flat surface.	