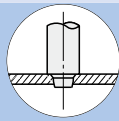


CHAMFERING PUNCHES

—CONFIGURABLE C DIMENSION TYPE·TIP STRAIGHT—



Type	Shank diameter D tolerance	M H	Catalog No.	Shape
—Shoulder— RoHS	D _{m5}	Equivalent to SKD11 60~63HRC	SPMUB	
			SHMUB	
			PHMUB	
—Key flat shank— RoHS	D +0.005 0	Equivalent to SKD11 60~63HRC	G-SPMUB	
			G-SHMUB	
			G-PHMUB	
—Tapped— RoHS	D _{m5}	Equivalent to SKD11 60~63HRC	MPMUB	
			MPHMUB	

B	H	V	M	Catalog No.		0.1mm increments		0.01mm increments				F	C
				Type	Shape	D	L	(A) min. P max.	(E G) P-max. P-Wmin.	(A) min. P max.	(E G) P-max. P-Wmin.		
—	7	—	—	Shoulder —Normal— SPMUB SHMUB PHMUB	A (Round)	4	30.0 ~ 90.0	1.00 ~ 1.80	1.80	1.00	28 ≤ F ≤ L - C - 2.0 Shape A P L-F 1.00 ~ 1.99 20 or less 2.00 ~ 3.99 35 or less 4.00 ~ 5.99 45 or less 6.00 ~ 7.99 50 or less Shapes E-G W L-F 1.00 ~ 1.29 8 or less 1.30 ~ 1.49 15 or less 1.50 ~ 1.99 20 or less	0.5 ≤ C ≤ (D-P)/2 - 0.6 and C ≤ 2.0	
	5					2.00 ~ 2.80		2.80	1.20				
	6					3.00 ~ 3.80		3.80	1.50				
	8					3.00 ~ 5.80		5.80	2.00				
	10					3.00 ~ 7.80		7.80	2.50				
	13					6.00 ~ 10.80		10.80	5.00				
	16					10.00 ~ 13.80		13.80	8.00				
	20					13.00 ~ 17.80		17.80	12.00				
25	18.00 ~ 22.80	22.80	17.00										
8	9	—	—	Key flat shank —Normal— G-SPMUB G-SHMUB G-PHMUB	E G	6	50.0 ~ 90.0	2.00 ~ 2.60	2.60	1.50	29 ≤ F ≤ L - C - 2.0 and B ≥ L - F + 2.0	0.5 ≤ C ≤ (V-P)/2 - 0.6 and C ≤ 3.5	
8	3.00 ~ 3.60					3.60		2.00					
10	3.00 ~ 5.60					5.60		2.50					
13	6.00 ~ 8.60					8.60		3.00					
16	10.00 ~ 11.60					11.60		4.00					
19	13.00 ~ 15.60	15.60	5.00										
20	18.00 ~ 20.60	20.60	6.00										
—	—	—	—	Tapped —Normal— MPMUB MPHMUB	A G	5	30.0 ~ 70.0	2.00 ~ 2.80	2.80	1.20	28 ≤ F ≤ L - C - 2.0 Shape A P L-F 1.00 ~ 1.99 20 or less 2.00 ~ 3.99 35 or less 4.00 ~ 5.99 45 or less 6.00 ~ 7.99 50 or less Shapes E-G W L-F 1.00 ~ 1.29 8 or less 1.30 ~ 1.49 15 or less 1.50 ~ 1.99 20 or less	0.5 ≤ C ≤ (D-P)/2 - 0.6 and C ≤ 2.0	
						6		2.00 ~ 3.80	3.80	1.50			
						8		3.00 ~ 5.80	5.80	2.00			
						10		3.00 ~ 7.80	7.80	2.50			
						13		6.00 ~ 10.80	10.80	5.00			
						16		10.00 ~ 13.80	13.80	8.00			
						20		13.00 ~ 17.80	17.80	12.00			
						25		18.00 ~ 22.80	22.80	17.00			

⊙ ⊙ Can be used shapes SPMUB□, G-SPMUB□, and MPMUB□ only.



Order

Catalog No. — L — P — W — F — C
 SPMUB 6 — 51.0 — P3.40 — F45.0 — C0.6
 G-SPMUBG 10 — 65.0 — P5.6 — W4.0 — F60.0 — C0.5



Days to Ship

Quotation



Alterations

Catalog No. — L — P — W — F — C — (PKC...etc.)
 SPMUB 5 — 55.0 — P2.40 — F52.0 — C0.5 — PKC

Alterations	Code	(A)	(E G)	1Code
Alterations to tip	PC	Tip dimension change PC ≥ $\frac{P_{min}}{2}$ ≥ 1.00 0.01mm increments (If combined with PKC, 0.001mm increments can be selected.)	—	Quotation
	PKC	Tip tolerance change P +0.01 ⇄ +0.005 0 (P dimension can be selected in 0.001mm increments.)	Tip tolerance change P-W ±0.01 ⇄ +0.01 0	
Alterations to full length	LKC	Full length tolerance change (L dimension can be selected in 0.01mm increments.)	L +0.3 ⇄ +0.05 0	Quotation
	LKZ	Full length tolerance change (L dimension can be selected in 0.01mm increments.)	L +0.3 ⇄ +0.01 0	
Shank	FKC	F dimension tolerance change	F +0.3 ⇄ +0.05 0	Quotation
	NDC	No press-in lead ℓ ≥ 3 ⇄ ℓ = 0 ⊙ Cannot be used for tapped types.	—	



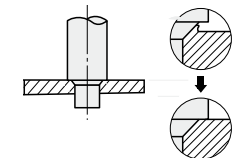
Price

Quotation

Alterations	Code	(A)	(E G)	1Code
Alterations to head	KC	Addition of single key flat ⊙ Cannot be used for D5 tapped types. ⊙ Cannot be used for key flat shank types.	Key flat position change 1° increments	Quotation
	WKC	Addition of double key flats in parallel ⊙ Cannot be used for D5 tapped types. ⊙ Cannot be used for key flat shank types.	Double key flats in parallel Can be combined with KC. ⊙ Cannot be used for key flat shank types.	
	HC	Head diameter change D ≤ HC < H 0.1mm increments	⊙ Cannot be used for tapped types.	
	TC	Head thickness change 2 ≤ TC < 5 0.1mm increments (If combined with TKC-TKM, 0.01mm increments can be selected.) ⊙ The full length L remains as specified. ⊙ Cannot be used for tapped types.	—	
	TKC	Head thickness tolerance change T +0.3 ⇄ +0.02 0	⊙ Cannot be used for tapped types.	
	TKM	Head thickness tolerance change T +0.3 ⇄ 0 0 ⇄ -0.02	⊙ Cannot be used for tapped types.	
TCC	TCC	Chamfering of head This improves the strength of the punch head. P.1611 0.5 ≤ TCC ≤ (H-D)/2 ⊙ If H ≤ 5, then TCC is 0.5. ⊙ Cannot be used for tapped types.	—	



Example



Parts which are raised during chamfering are also chamfered down.