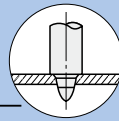


CHAMFERING PUNCHES

—TiCN COATING · DLC COATING, CONFIGURABLE C DIMENSION TYPE · TIP PILOT—



PRODUCTS DATA

P.1604 · 1605 · 1609

Type	S	M	Catalog No.	Shape	
Shoulder	TiCN coating Surface treatment 3000HV	Equivalent to SKH51 61~64HRC	H—HSRMUB	<p>Tip shape A</p>	
			H—PSRMUB		
DLC coating Surface treatment 3000HV	Equivalent to SKH51 61~64HRC	—DLC coating— N—HSRMUB —Foundation WPC®— NW—HSRMUB	<p>Ⓢ RT(※) → If P < 8, tip is rounded for safety. To keep the sharp tip (no rounding), specify RT=0. (Cannot be used for foundation WPC®) Ⓢ For the length of tip R, refer to the products data "Punch R length". P.1592</p>		
		—DLC coating— N—PSRMUB —Foundation WPC®— NW—PSRMUB			
Key flat shank	TiCN coating Surface treatment 3000HV	Equivalent to SKH51 61~64HRC		GH—HSRMUB	<p>Tip shape A</p>
				GH—PSRMUB	
DLC coating Surface treatment 3000HV	Equivalent to SKH51 61~64HRC	—DLC coating— GN—HSRMUB —Foundation WPC®— GNW—HSRMUB	<p>Ⓢ RT(※) → If P < 8, tip is rounded for safety. To keep the sharp tip (no rounding), specify RT=0. (Cannot be used for foundation WPC®) Ⓢ For the length of tip R, refer to the products data "Punch R length". P.1592</p>		
		—DLC coating— GN—PSRMUB —Foundation WPC®— GNW—PSRMUB			
Tapped	TiCN coating Surface treatment 3000HV	Powdered high-speed steel 64~67HRC		H—MRHMUB	<p>Tip shape A</p>
				H—MRHMUB	
DLC coating Surface treatment 3000HV	Powdered high-speed steel 64~67HRC	—DLC coating— N—MRHMUB —Foundation WPC®— NW—MRHMUB	<p>Ⓢ RT(※) → If P < 8, tip is rounded for safety. To keep the sharp tip (no rounding), specify RT=0. (Cannot be used for foundation WPC®) Ⓢ For the length of tip R, refer to the products data "Punch R length". P.1592</p>		
		—DLC coating— N—PSRMUB —Foundation WPC®— NW—PSRMUB			



Order

Catalog No. — L — P — F — C

H—HSRMUB 6 — 51.0 — P3.40 — F45.0 — C0.6

GN—HSRMUB 10 — 70.0 — P5.6 — F65.0 — C0.5



Alterations

Catalog No. — L — P — F — C — (PKC...etc.)

GN—HSRMUB 10 — 70.0 — P5.6 — F65.0 — C0.5 — PKC



Days to Ship

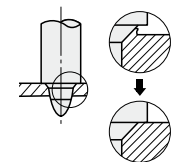
Quotation

Alterations	Code	(A)	1Code
Alterations to tip	PC	Tip dimension change $P \geq \frac{P_{min}}{2} \geq 1.00$ 0.01mm increments (If combined with PKC, 0.001mm increments can be selected.)	
	PKC	Tip tolerance change $P_{+0.01}$ / $P_{+0.005}$ (P dimension can be selected in 0.001mm increments.) Ⓢ TiCN coating cannot be used for D > 13.	
	RLC	Tip R is cut flat. $2 \leq RLC < \sqrt{P(P-4)}$ 0.1mm increments Ⓢ Can be used for P < 8.	
Shank	FKC	F dimension tolerance change $F_{+0.3}$ / $F_{+0.05}$	
	NDC	No press-in lead $\ell \geq 3 \rightarrow \ell = 0$ Ⓢ Cannot be used for tapped types.	

Alterations	Code	(A)	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.	
	WKC	Addition of double key flats in parallel Ⓢ Cannot be used for D5 tapped types. Ⓢ Cannot be used for key flat shank types.	
	HC	Head diameter change $D \leq HC < H$ 0.1mm increments Ⓢ Cannot be used for tapped types.	
	TC	Head thickness change $2 \leq TC < 5$ 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 $T_{+0.3}$ / $T_{+0.02}$ / T_0 Ⓢ Cannot be used for tapped types.	
	TKM	Head thickness tolerance $T_{+0.3}$ / $T_{-0.02}$ / T_0 Ⓢ Cannot be used for tapped types.	
TCC	TCC	Chamfering of head This improves the strength of the punch head. P.1611 0.5mm increments $0.5 \leq TCC \leq (H-D)/2$ Ⓢ 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.



Price

Quotation

Effects of DLC coating

Effective for preventing adhesion during aluminum or copper blanking thanks to its low affinity for nonferrous metal. See the product data for details. P.1609

B	H	V	M	Catalog No.		0.1mm increments		0.01mm increments (A)		0.1mm increments	
				Type	Shape	D	L	min. P	max.	F	C
—	7	—	—	Shoulder —TiCN coating— H—HSRMUB H—PSRMUB —DLC coating— N—HSRMUB N—PSRMUB —DLC coating foundation WPC®— NW—HSRMUB NW—PSRMUB	A	4	30.0 ~ 90.0	1.00 ~ 1.80	28 ≤ F ≤ L - C - 2.0	0.5 ≤ C ≤ (D - P) / 2 - 0.6	
						5		2.00 ~ 2.80			
						6		3.00 ~ 3.80			
						8		4.00 ~ 5.80			
						10		5.00 ~ 7.80			
						13		6.00 ~ 10.80			
						16		7.00 ~ 13.80			
						20		8.00 ~ 17.80			
8	9	4.8	—	Key flat shank —TiCN coating— GH—HSRMUB GH—PSRMUB —DLC coating— GN—HSRMUB GN—PSRMUB —DLC coating foundation WPC®— GNW—HSRMUB GNW—PSRMUB	A (Round) Unnecessary to specify shape in this case.	6	50.0 ~ 90.0	2.00 ~ 2.60	29 ≤ F ≤ L - C - 2.0 and B ≥ L - F + 2.0	0.5 ≤ C ≤ (V - P) / 2 - 0.6	
						8		3.00 ~ 3.60			
						10		4.00 ~ 5.60			
						13		5.00 ~ 8.60			
						16		6.00 ~ 11.60			
						20		7.00 ~ 15.60			
						25		8.00 ~ 20.60			
						—		—			—
6	3.00 ~ 3.80										
8	4.00 ~ 5.80										
10	5.00 ~ 7.80										
13	6.00 ~ 10.80										
16	7.00 ~ 13.80										
20	8.00 ~ 17.80										
25	9.00 ~ 22.80										