

# STRAIGHT PILOT PUNCHES

—TiCN COATING—



Type	M	Catalog No.	Shape
—Tip R type—	Equivalent to SKH51 61~64HRC Surface hardness 3000HV	H—HSTC	
	Powdered high-speed steel 64~67HRC Surface hardness 3000HV	H—PSTC	
—Tapered tip type—	Equivalent to SKH51 61~64HRC Surface hardness 3000HV	H—HTTC	
	Powdered high-speed steel 64~67HRC Surface hardness 3000HV	H—PTTC	
—Sharp tip angle type—	Equivalent to SKH51 61~64HRC Surface hardness 3000HV	H—HATTC	
	Powdered high-speed steel 64~67HRC Surface hardness 3000HV	H—PATTC	

Type	Catalog No.		L				0.01mm increments	A	Y	H
	No.					min. P max.				
Equivalent to SKH51 H—HSTC H—HTTC H—HATTC	1.6	42 52 62				1.00~ 1.60	(10)	2	2.6	
	2.0	42 52 62				1.00~ 2.00			3	
	2.5	42 52 62				1.50~ 2.50			3.5	
	3	42 52 62 72 82 (92)				2.00~ 3.00			5	
	4	42 52 62 72 82 (92)				3.00~ 4.00			7	
Powdered high-speed steel H—PSTC H—PTTC H—PATTC	5	42 52 62 72 82 (92)				4.00~ 5.00	(15)	3	8	
	6	42 52 62 72 82 (92)				5.00~ 6.00	(20)		9	
	8	42 52 62 72 82 (92)				6.00~ 8.00	25	5	11	
	10	42 52 62 72 82 (92) (102)				8.00~ 10.00	30		13	
	13	42 52 62 72 82 (92) (102)				10.00~ 13.00			16	
	16	42 52 62 72 82 (92) (102)				13.00~ 16.00		8	19	
	20	42 52 62 72 82 (92) (102)				16.00~ 20.00			23	
	25	42 52 62 72 82 (92) (102)				20.00~ 25.00			28	

Ⓜ L (92) (102) → L92 and 102 can be used for tip R types and tapered tip types only.  
 ⊗ A (10) → If P ≥ 6.0, A10 cannot be selected. ⊗ A (15) → If P ≥ 15.0, A15 cannot be selected.  
 ⊗ A (20) → If P ≥ 20.0, A20 cannot be selected.

**Order** Catalog No. — L — P — A —  $\begin{matrix} RT=0 \\ R=0 \end{matrix}$

H—PSTC 6 — 72 — P5.02 — RT0  
 H—HATTC 8 — 42 — P7.03 — A15

Ⓜ A Can be used for sharp tip angle types only.  
 ⊗ RT=0 only can be selected. (Can be used for tip R types with P < 8 and sharp tip angle types.)  
 ⊗ R=0 only can be selected. (Can be used for tapered tip types and sharp tip angle types.)

**Days to Ship** **Quotation**

**Alterations** Catalog No. — L (LC-LCT-LMT) — P — A —  $\begin{matrix} RT=0 \\ R=0 \end{matrix}$  — (YC·HC·TC, etc.)

H—PSTC 10 — LC65 — P8.50 — KC

Alteration	Code	Tip R type	Tapered tip and sharp tip angle types	1Code
<b>Alterations to tip</b>	YC	—	Tip taper length change • P < 2.0 1 ≤ YC ≤ P × 2.83 - 0.3 • P ≥ 2.0 1 ≤ YC ≤ P × 1.86 - 0.3 ≤ 18 L (LC) + YC ≤ Lmax. + 8 0.1mm increments ⊗ Cannot be used for sharp tip angle types.	
	RLC	Tip R is cut flat. 2 ≤ RLC < Y < 8 Y = √P(10 - P/4) 0.1mm increments	—	
	SC	Lapping of tip Ⓜ P dimension tolerance remains the same. Ⓜ The base material is finished before the coating is applied. Lapping range (B) P (B) 1.00~2.99 13 3.00~9.99 19 10.00~ 25	Ⓜ If L < (B) + 20, (B) is adjusted to (L - 20). ⊗ R=0 and RT=0 cannot be selected. Ⓜ Lapping range for straight portion is min.5mm.	
<b>Alterations to full length</b>	LC	Full length change 25 ≤ LC < L 0.1mm increments	—	
	LCT	Changes to head thickness tolerance and full length are processed using a single code. The allowable range of change, increments, and notes (Ⓜ) are the same as for LC. TKC Head thickness tolerance change T +0.3 0 ↔ +0.02 0	LC Full length change	
	LMT	Changes to head thickness tolerance and full length are processed using a single code. The allowable range of change, increments, and notes (Ⓜ) are the same as for LC. TKM Head thickness tolerance change T +0.3 0 ↔ -0.02 0	LC Full length change	

Alteration	Code	Tip R type	Tapered tip and sharp tip angle types	1Code
<b>Alterations to head</b>	HC	Head diameter change P ≤ HC < H 0.1mm increments Ⓜ 2.6 ≤ HC < H		
	TC	Head thickness change 4 ≤ TC < 5 0.1mm increments (If combined with LCT, LMT, TKC, and TKM, 0.01mm increments can be selected.) Ⓜ Full length L is shortened by (5 - TC). If combined with LC, full length is equal to LC.		
	KC	Addition of single key flat to head		
	WKC	Addition of double key flats in parallel		
	TKC	Head thickness tolerance change T +0.3 0 ↔ +0.02 0		
TKM	Head thickness tolerance change T +0.3 0 ↔ -0.02 0			

**Price** **Quotation**

PILOT PUNCHES