




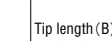

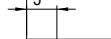

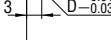
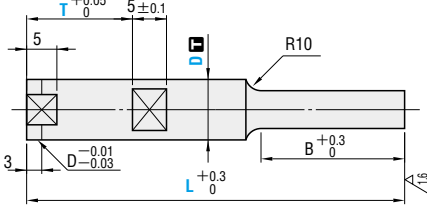





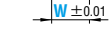



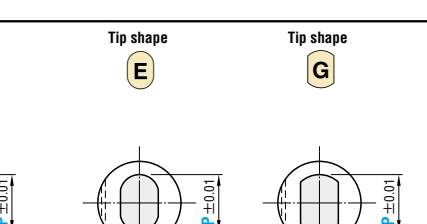


PUNCHES WITH KEY GROOVES

Type	Shank diameter D Tolerance	Material M	Catalog No.		The tip shape can be selected from Tip shape A~G in the figure below.	
			Type	Tip shape Tip length	A	B
 	Dm5	Equivalent to SKD 11 60~63HRC Equivalent to SKH51 61~64HRC Powdered high-speed steel 64~67HRC	SK	    	  	
			SHK			
			PK			
	D ^{+0.005} ₀	Equivalent to SKD 11 60~63HRC Equivalent to SKH51 61~64HRC Powdered high-speed steel 64~67HRC	A-SK	    	  	
			A-SHK			
			A-PK			

Type	Tip shape	Tip length	Catalog No.										L	0.1 mm increments	B	U Key groove depth		
			0.01 mm increments															
			min. P max.		P-Kmax.		P-Wmin.		R		R							
(Dm5) SK SHK PK	S	3	40	50	60	70	80	1.00	2.99	—	—	—	—	0.15 ≤ R < W/2 T > 5.0	8	0.5		
		4	40	50	60	70	80	1.00	3.99	3.97	1.00	—	—					
		5	40	50	60	70	80	2.00	4.99	4.97	1.20	—	—					
		6	40	50	60	70	80	2.00	5.99	5.97	1.50	—	—					
		8	(40)	50	60	70	80	90	100	3.00	7.99	7.97	2.00				—	—
		10	(40)	50	60	70	80	90	100	3.00	9.99	9.97	2.50				—	—
	(D ^{+0.005}) A-SK A-SHK A-PK	L	3	50	60	70	80	1.00	2.99	—	—	—	—					
			4	50	60	70	80	1.00	3.99	3.97	2.00	—	—					
			5	50	60	70	80	2.00	4.99	4.97	2.00	—	—					
			6	50	60	70	80	2.00	5.99	5.97	2.00	—	—					
			8	50	60	70	80	90	100	3.00	7.99	7.97	2.50			—	—	
			10	50	60	70	80	90	100	3.00	9.99	9.97	2.50			—	—	
		X	3	50	60	70	80	1.20	2.99	—	—	—	—					
			4	50	60	70	80	1.20	3.99	3.97	2.00	—	—					
			5	60	70	80	2.00	4.99	4.97	3.50	—	—						
			6	60	70	80	2.00	5.99	5.97	3.50	—	—						
(D ^{+0.005}) A-SK A-SHK A-PK	X	8	60	70	80	90	100	3.00	7.99	7.97	5.00	—	—					
		10	60	70	80	90	100	3.00	9.99	9.97	5.00	—	—					
		13	60	70	80	90	100	6.00	12.99	12.97	5.00	—	—					
		16	60	70	80	90	100	10.00	15.99	—	—	—	—					

Ⓛ (40) → B=8 If the full length is (40), the tip length is 8mm in all cases.
 Ⓛ If no key groove is required, select T dimension that is the same as the full length L.

Order **Catalog No.** — **L** — **P** — **W** — **R (R only)** — **T** Ⓛ If no key groove is required, select T=L.
 SKEL 16 — 70 — P12.00 — W6.00 — T20.1
 A-SKAS 3 — 40 — P 1.80 — T13.0

Days to Ship **Quotation**

Alterations **Catalog No.** — **L (LC-LCT)** — **P (PC)** — **W (WC)** — **R** — **T** — (BC-KC-PKC, etc.)
 SKEL 16 — LC68 — P12.00 — W6.00 — T20.5 — PKC

Alteration	Code	A	D R E G	1Code
Alterations to tip	PC WC	Tip dimension change $PC \geq \frac{P_{min}}{2}$ 0.01 mm increments (If combined with PKC, 0.001mm increments can be selected.) P(PC) Bmax 0.500~0.799 10 0.800~0.999 13 1.000~1.999 20 2.000~3.999 35 4.000~4.999 45 5.000~5.999 50 6.000~ 60	Tip dimension change $WC \geq \frac{P-W_{min}}{2} \geq 0.80$ 0.01 mm increments Ⓛ Cannot be used for tip X.	1Code
	BC	Tip length change $2 \leq BC \leq B_{max}$ 0.1 mm increments Ⓛ Full length L must be at least 25mm longer than tip length BC.	Tip length change $2 \leq BC \leq B_{max}$ 0.1 mm increments Ⓛ Full length L must be at least 30mm longer than tip length BC.	1Code
Alterations to full length	LC	Full length change $25+B(BC) \leq LC < L$ 0.1 mm increments Ⓛ If difference between full length and tip length is 25mm or less, tip length is adjusted to (Full length-25mm).	Full length change $30+B(BC) \leq LC < L$ 0.1 mm increments Ⓛ If difference between full length and tip length is 30mm or less, tip length is adjusted to (Full length-30mm).	1Code
	LCT	T dimension tolerance and full length change are processed using a single code. The allowable range of change, increment, ordering process, and notes (Ⓛ) are the same as for LC.	Full length tolerance change $T+0.05 \rightarrow 0 \rightarrow -0.02$	1Code
	LKC	Full length tolerance change $L+0.3 \rightarrow +0.05 \rightarrow 0$	Full length tolerance change $L+0.3 \rightarrow +0.1 \rightarrow 0$	1Code
	LKZ	Full length tolerance change $L+0.3 \rightarrow +0.01 \rightarrow 0$	Full length tolerance change $L+0.3 \rightarrow +0.01 \rightarrow 0$	1Code
	KC	Key flat position change 1° increments	Key flat position change 1° increments	1Code
	KD	Key groove position change 1° increments	Key groove position change 1° increments	1Code
Others	WKC	Ⓛ Addition of double key grooves in parallel	Ⓛ Double key grooves in parallel. Can be combined with KD.	1Code
	UK	Key groove depth change $4.5 \rightarrow 0.7$ $6 \rightarrow 1.2$ $8 \rightarrow 1.7$ Ⓛ Cannot be used for D3.	Key groove depth change $4.5 \rightarrow 0.7$ $6 \rightarrow 1.2$ $8 \rightarrow 1.7$ Ⓛ Cannot be used for D3.	1Code
	TKC	T dimension tolerance change $T+0.05 \rightarrow 0 \rightarrow -0.02$	T dimension tolerance change $T+0.05 \rightarrow 0 \rightarrow -0.02$	1Code
	SKC	Single key flat on shank Ⓛ D4~6 P≤D-1.2 W≤D-1.2 (Machining width 0.5) Ⓛ D8~ P≤D-2.2 W≤D-2.2 (Machining width 1) Ⓛ Cannot be used for D3. Ⓛ Cannot be combined with KC-KD-WKD.	Single key flat on shank Ⓛ D4~6 P≤D-1.2 W≤D-1.2 (Machining width 0.5) Ⓛ D8~ P≤D-2.2 W≤D-2.2 (Machining width 1) Ⓛ Cannot be used for D3. Ⓛ Cannot be combined with KC-KD-WKD.	1Code

Price **Quotation**

Fixing keys for punches with key grooves P.245

