
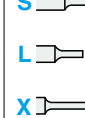
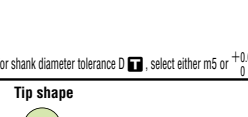
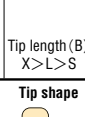


PUNCHES WITH KEY GROOVES

— DLC COATING —

PRODUCTS DATA

P.1605 ~ 1609

Type	Shank diameter D Tolerance	M F	Catalog No.		The tip shape can be selected from Tip shape A~G in the figure below.
			Type	Tip shape Tip length	
	D _{m5}	Equivalent to SKH51 61~64HRC Surface3000HV~	N-SHK NW-SHK	A D R E G	
			N-PK NW-PK	S L X	
	D _{+0.005/0}	Equivalent to SKH51 61~64HRC Surface3000HV~	AN-SHK ANW-SHK	A D R E G	
			AN-PK ANW-PK	S L X	

For shank diameter tolerance D, select either m5 or +0.005/0.

The tip edge of a WPC® treatment punch is very slightly rounded.
The tip end is ground before the coating is applied.

Type	Tip shape	Tip length	D	L								0.01mm increments			B	U Key groove depth	
				L								A	D R E G	R			
				min. P	max. P	P-Kmax.	P-Wmin.	R	T	B	U						
(D _{m5}) N-SHK N-PK — Foundation WPC® NW-SHK NW-PK (D _{+0.005/0}) AN-SHK AN-PK — Foundation WPC® ANW-SHK ANW-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
	L	13	(40)	50	60	70	80	90	100	6.00~	12.99	12.97	3.00				
		16	(40)	50	60	70	80	90	100	10.00~	15.99	15.97	4.00				
		3	50	60	70	80	1.20~	2.99	—	—							
		4	50	60	70	80	1.20~	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							
	X	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					
		13	50	60	70	80	90	100	6.00~	12.99	12.97	3.00					
		16	60	70	80	90	100	10.00~	15.99	15.97	4.00						
3		50	60	70	80	1.20~	2.99	—	—								
4		50	60	70	80	1.20~	3.99	3.97	2.00								
X	5	60	70	80	2.00~	4.99	4.97	3.50									
	6	60	70	80	2.00~	5.99	5.97	3.50									
	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	70	80	90	100	10.00~	15.99	15.97	5.00								

L (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
N-SHKEL16	70	P12.00	W6.00		T20.1
AN-SHKAS3	40	P1.80			T13.0

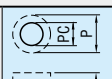
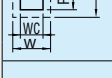
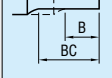

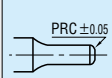
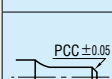

If no key groove is required, select T=L.

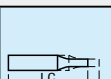

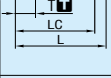
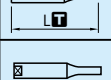
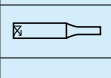
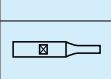
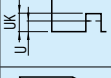

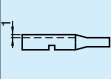

Days to Ship **Quotation**

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

Alterations

Catalog No.	L (LC-LCT)	P (PC)	W (WC)	R	T	(BC-KC-LKC...etc.)
N-SHKEL16	LC68	P12.00	W6.00		T20.5	LKC

Alterations	Code	A	D R E G	1Code
	PC WC	Tip dimension change PC ≥ P _{min} ≥ 1.00 0.01 mm increments (If combined with PKC, 0.001mm increments can be selected.) P (PC) Bmax 1.000~1.999 20 2.000~3.999 35 4.000~5.999 45 6.000~ 60	Tip dimension change WC ≥ P-Wmin. ≥ 1.00 0.01 mm increments ⊗ Cannot be used for tip X. P (PC) · W (WC) Bmax 1.00~1.49 8 1.50~1.99 13 2.00~3.49 19 3.50~4.99 25 5.00~ 30	
	BC	Tip length change 2 ≤ BC ≤ Bmax. 0.1 mm increments ⊗ Full length L must be at least 25mm longer than tip length BC.	Tip length change 2 ≤ BC ≤ Bmax. 0.1 mm increments ⊗ Full length L must be at least 30mm longer than tip length BC.	
	SC	Lapping of tip ⊗ P dimension tolerance and increment are the same. The base material is finished before coating is applied. ⊗ R=0 cannot be selected for the tip D corner. ⊗ Cannot be combined with foundation WPC®.		
	PRC	Rounding of tip side edge 0.3 ≤ PRC ≤ 1 0.1 mm increments ⊗ PRC ≤ (P-0.2)/2 ⊗ Cannot be combined with PCC-GC. It is PRC ≤ 0.1 for foundation WPC®.		Quotation
	PCC	Chamfering to tip side edge 0.3 ≤ PCC ≤ 1 0.1 mm increments ⊗ PCC ≤ (P-0.2)/2 ⊗ Cannot be combined with PRC-GC. Foundation WPC® cannot be used.		Quotation
	GC	20° ≤ GC < 90° 1° increments Tip length B ≥ f+2 f = P/2 × tan(90° - GC) ⊗ When combined with SC, tip edges are rounded. ⊗ Cannot be combined with LKC-LCT-PRC-PCC. Foundation WPC® cannot be used.		
	PKC	Tip tolerance change P +0.01 → +0.005 0 0 (P dimension can be selected in 0.001 mm increments.)	Tip tolerance change P · W ± 0.01 → +0.01 0	

Alterations	Code	A	D R E G	1Code
	LC	Full length change 25+B (BC) ≤ 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) ≤ 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).	
	LCT	T dimension tolerance change T +0.05 → 0 -0.02	Full length tolerance change L +0.3 → +0.1 0 0	
	LKC	Full length tolerance change L +0.3 → +0.05 0 0		
	KC		Key flat 90° 180° position change 270° 1° increments	
	NKC		No key flat	
	KD		Key groove 90° 180° position change 270° 1° increments	
	WKD	Addition of double key grooves in parallel	Double key grooves in parallel. Can be combined with KD.	
	UK	Key groove depth change ⊗ Cannot be used for D3.	D UK 4~5 0.7 6 1.2 8~16 1.7	
	TKC	T dimension tolerance change T +0.05 → 0 -0.02		
	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-10-WKD.		

Price **Quotation**

Fixing keys for punches with key grooves P.245

PSKB PSKBH	PSKS PSKJ	PSK PSKP PSKH	PSKW
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