

SHOULDER PUNCHES

—DICOAT® TREATMENT—



Type	Shank diameter D Tolerance	M A	Catalog No.			The tip shape can be selected from Tip shape A~G in the figure below.
			Type	Tip shape	Tip length	
	Dm5 (D3~25)	M	T-SP	A	S	
			T-PH	D	L	
	D+0.005/0 (D3~13)	A	AT-SP	E	X	
			AT-PH	G		

Type	Tip shape	Tip length	Catalog No.										B	H			
			L														
			0.01 mm increments														
(Dm5)	A, D, R, E, G	S, L	3	40	50	60	70	80	min. P	max. P	P·Kmax.	P·Wmin.	R	0.15 ≤ R < W/2			
			4	40	50	60	70	80	1.00	2.99	—	—	—				
			5	40	50	60	70	80	1.00	3.99	3.97	1.00	—				
			6	40	50	60	70	80	2.00	4.99	4.97	1.20	—				
			8	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	—
			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	—
			20	(40)	50	60	70	80	90	100	13.00	19.99	19.97			5.00	—
			25	(40)	50	60	70	80	90	100	18.00	24.99	24.97			6.00	—
			(D+0.005) (D3~13)	A, D, R, E, G	S, 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	3.00	7.99	7.97	2.50	—					
10	50	60				70	80	3.00	9.99	9.97	2.50	—					
13	50	60				70	80	6.00	12.99	12.97	3.00	—					
16	60	70				80	90	100	10.00	15.99	15.97	4.00	—				
20	60	70				80	90	100	13.00	19.99	19.97	5.00	—				
25	60	70				80	90	100	18.00	24.99	24.97	6.00	—				
AT-SP AT-PH	A	X				3	50	60	70	80	2.00	2.99	—	—	—		
						4	50	60	70	80	2.00	3.99	—	—	—		
						5	60	70	80	—	—	—	—	—	—		
						6	60	70	80	—	—	—	—	—	—		
						8	60	70	80	90	100	3.00	7.99	—	—	—	
			10	60	70	80	90	100	3.00	9.99	—	—	—				
			13	60	70	80	90	100	6.00	12.99	—	—	—				
			16	70	80	90	100	—	—	—	—	—	—				
			20	70	80	90	100	—	—	—	—	—	—				
			25	70	80	90	100	—	—	—	—	—	—				

ⓐ: P>D-0.03→ℓ=0 If P>D-0.03 for a round punch, D^{-0.01}_{0.03} (press-in lead) is not included.
 ⓑ: P·K>D-0.05→ℓ=0 If P·K>D-0.05 for a shaped punch, D^{-0.01}_{0.03} (press-in lead) is not included.
 Ⓒ: L(40)→B=8 If full length is (40), tip length is 8 mm in all cases.

Order **Catalog No.** — **L** — **P** — **W** — **R (R only)**
 T-SPEL 16 — 70 — P12.00 — W6.00

Days to Ship **Quotation**

Alterations **Catalog No.** — **L(LC-LCT-LMT)** — **P(PC)** — **W(WC)** — **R** — **(BC-HC-TC, etc.)**
 T-SPEL 16 — LC65 — P12.00 — W6.00 — R — BC90

Alteration	Code	A	D R E G	1Code
Alterations to tip	PC WC	Tip dimension change PC ≥ P _{min} ≥ 1.00 0.01 mm increments	Tip dimension change PC ≥ P·W _{min} ≥ 1.00 0.01 mm increments	
	BC	Tip length change 2 ≤ BC ≤ B _{max} 0.1 mm increments	Tip length change 2 ≤ BC ≤ B _{max} 0.1 mm increments	
	PRC	Rounding of tip side edge 0.3 ≤ PRC ≤ 1 0.1 mm increments		
	LC	Full length change 25+B(BC) ≤ LC < L 0.1 mm increments	Full length change 30+B(BC) ≤ LC < L 0.1 mm increments	
Alterations to full length	LCT	Changes to head thickness tolerance and full length are processed using a single code. The allowable range of change, increment, ordering process, and notes (ⓐ) are the same as for LC.	TKC Head thickness tolerance change T+0.3 → +0.02 0 → 0	LC Full length tolerance change L+0.3 → +0.1 0 → 0
	LMT	Changes to head thickness tolerance and full length are processed using a single code. The allowable range of change, increment, ordering process, and notes (ⓐ) are the same as for LC.	TKM Head thickness tolerance change T+0.3 → 0 0 → -0.02	LC Full length tolerance change L+0.3 → +0.1 0 → 0
	LKC	Full length tolerance change L+0.3 → +0.05 0 → 0		
	Alterations to head	KC	Addition of single key flat to head	Key flat position change 1° increments
WKC		Addition of double key flats in parallel	Double key flats in parallel Can be combined with KC.	

Price **Quotation**

Alteration	Code	A	D R E G	1Code
Alterations to head	KFC	Double key flats at 0° and a selected angle 1° increments	Double key flats at 0° and a selected angle 1° increments	
	NKC		No key flat	
	HC	Head diameter change D ≤ HC < H 0.1 mm increments		
	TC	Head thickness change 2 ≤ TC < 5 0.1 mm increments (If combined with TKC-TKM-LCT-LMT, 0.01 mm increments can be selected.)		
	TKC	Head thickness tolerance change T+0.3 → +0.02 0 → 0		
	TKM	Head thickness tolerance change T+0.3 → 0 0 → -0.02		
Alterations to shank	TCC	Chamfering of head This improves the strength of the punch head. P.1611		
	TCC	0.5 ≤ TCC ≤ (H-D)/2 If H ≤ 5, then TCC is 0.5.		
	RC	Head thickness is machined to a tolerance of -0.04~0 relative to the retainer surface. ⓐ Cannot be used for D ^{+0.005} ₀ types.		
	SKC	Single key flat on shank ⓐ D3~6 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 combined with KC-WKC-KFC.		
Alterations to shank	UC	Modification for urethane stripper (USN) installation ⓐ For details P.750. ⓐ Can be used for D10~25.		
	NDC	No press-in lead ℓ ≥ 3 → ℓ = 0		

PUNCHES

Quotation