

JECTOR PUNCHES

—WPC® TREATMENT·HW COATING—



Calculating the projection length of the jector pin (reference value) P.241

For details of jector holes, refer to Jector Punch Blanks. P.236
 For details of jector pins, refer to Jector Pin Sets. P.241

Type	M	Catalog No.		Tip shape	B Tip length	The tip shape can be selected from Tip shape A~G in the figure below.
		Type	Shank dia. D			
—WPC® treatment— RoHS	61~64HRC Surface 1000~1100HV	W-SJ	AW-SJ	A	S	<p>The tip edges are very slightly rounded.</p>
		W-SJV	AW-SJV	D	L	
—HW coating—	Powdered high-speed steel 64~67HRC Surface 1000HV~1100HV	W-PJ	AW-PJ	R	L	
		W-PJV	AW-PJV	E	X	
		HW-PJ	AHW-PJ	G	X	
		HW-PJV	AHW-PJV	G	X	
		HW-PJV	AHW-PJV	G	X	

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

Tip shape A: $P > D - 0.03$, $\ell = 0$. Tip shape D: $R \leq 0.2$, $P \geq W$, $K = \sqrt{P^2 + W^2}$. Tip shape R: $P \geq W$. Tip shape E: $0.15 \leq R < \frac{W}{2}$. Tip shape G: $K = \sqrt{(P-2R)^2 + (W-2R)^2} + 2R$.

Type	Tip shape	B Tip length	D	0.01mm increments												B	H
				L				DREG				R					
				min.	P max.	P-Kmax.	P-Wmin.	A	D	R	E		G				
—WPC® treatment— W-SJ W-PJ	S	(4)	40	50	60	70	80	1.00	3.99	3.97	1.00	R (only)	7	7			
Spring reinforced type (D8~25) W-SJV W-PJV		(5)	40	50	60	70	80	2.00	4.99	4.97	2.00		8	8			
—HW coating— HW-PJ		(6)	40	50	60	70	80	2.00	5.99	5.97	2.00		9	9			
		8	(40)	50	60	70	80	90	100	3.00	7.99		7.97	3.00	11	11	
		10	(40)	50	60	70	80	90	100	3.00	9.99		9.97	3.00	13	13	
		13	(40)	50	60	70	80	90	100	6.00	12.99		12.97	6.00	16	16	
		16	(40)	(50)	60	70	80	90	100	10.00	15.99		15.97	6.00	19	19	
Spring reinforced type (D8~25) HW-PJV		20	(40)	(50)	60	70	80	90	100	13.00	19.99		19.97	6.00	23	23	
—WPC® treatment— AW-SJ AW-PJ		25	(40)	(50)	60	70	80	90	100	18.00	24.99		24.97	6.00	28	28	
		Spring reinforced type (D8~25) AW-SJV AW-PJV	(4)	50	60	70	80	1.00	3.99	3.97	2.00		0.15 ≤ R < W/2	7	7		
			(5)	50	60	70	80	2.00	4.99	4.97	2.00			8	8		
			(6)	50	60	70	80	2.00	5.99	5.97	2.00			9	9		
			8	50	60	70	80	90	100	3.00	7.99			7.97	3.00	11	11
—HW coating— AHW-PJ	10	50	60	70	80	90	100	3.00	9.99	9.97	3.00	13	13				
	13	50	60	70	80	90	100	6.00	12.99	12.97	6.00	16	16				
	16	60	70	80	90	100	10.00	15.99	15.97	6.00	19	19					
	20	60	70	80	90	100	13.00	19.99	19.97	6.00	23	23					
	25	60	70	80	90	100	18.00	24.99	24.97	6.00	28	28					
—WPC® treatment— W-SJ	X	(5)	60	70	80	2.00	4.99	4.97	3.50	0.15 ≤ R < W/2	8	8					
Spring reinforced type (D8~25) W-SJV		(6)	60	70	80	2.00	5.99	5.97	3.50		9	9					
—HW coating— AW-SJ		8	70	80	90	100	3.00	7.99	7.97		5.00	11	11				
		10	70	80	90	100	3.00	9.99	9.97		6.00	13	13				
		13	70	80	90	100	6.00	12.99	12.97		6.00	16	16				
		16	80	90	100	10.00	15.99	15.97	6.00		19	19					
Spring reinforced type (D8~25) AW-SJV	20	80	90	100	13.00	19.99	19.97	6.00	23	23							
25	80	90	100	18.00	24.99	24.97	6.00	28	28								

The spring constants of W-SJV, W-PJV, HW-PJV, AW-SJV, AW-PJV, and AHW-PJV are twice those of W-SJ, W-PJ, HW-PJ, AW-SJ, AW-PJ, and AHW-PJ respectively.

L(40) → B=6 If full length is (40), tip length is 6mm in all cases.
 L(50) → B=13 If full length is (50), tip length is 13mm in all cases.

A: P > D - 0.03 → ℓ = 0 If P > D - 0.03 for a round punch, D - 0.01 (press-in lead) is not included.
 R E G: P · K > D - 0.05 → ℓ = 0 If P · K > D - 0.05 for a shaped punch, D - 0.01 (press-in lead) is not included.

D(4), (5), and (6) are specifications available for W-SJ, W-PJ, HW-PJ, AW-SJ, AW-PJ, AHW-PJ, W-SJ, and AW-SJ only. Spring reinforced types are available for D8~25 only.

Order

Catalog No.	— L — P — R (only)
W-SJDS 6	60 — P3.00 — W2.80
HW-PJEL 10	70 — P8.50 — W4.25

Effect of spring reinforced type
 The spring constant is twice that of a standard type jector punch. The large spring load results in more effective scrap removal.

Days to Ship **Quotation**

Alterations

Catalog No. — L(LC-LCT-LMT) — P(PC) — W(WC) — R — (BC-HC-TC, etc.)
 W-SJDS 6 — LC58 — P3.00 — W2.80 — HC8-KC45

Alteration	Code	A	D R E G	1Code
Alterations to tip	PC WC	Tip dimension change PC ≥ PCmin. 0.01 mm increments (If combined with PKC, 0.001 mm increments can be selected.)	Tip dimension change PC · WC ≥ PC · WCmin. 0.01 mm increments ⊗ Cannot be used for D4. ⊗ Cannot be used for tip X.	1Code
	BC	Tip length change (shorter than standard) 2 ≤ BC < B 0.1 mm increments ⊗ The following restriction applies to tip type X with D dimension of 5 or 6. PC-WC Bmax. 1.80 ~ 1.99 20		
	PRC	Rounding of tip side edge 0.3 ≤ PRC ≤ 1 0.1 mm increments ⊗ PRC ≤ (P - d) - 0.5 / 2 ⊗ d, dimension P.236 ⊗ Cannot be combined with PCC.		
	PCC	Chamfering of tip side edge 0.3 ≤ PCC ≤ 1 0.1 mm increments ⊗ PCC ≤ (P - d) - 0.5 / 2 ⊗ d, dimension P.236 ⊗ Cannot be combined with PRC.		
	PKC	Tip tolerance change P + 0.01 → +0.005 ⊗ (P dimension can be selected in 0.001 mm increments.) ⊗ Cannot be used with HW coating.	Tip tolerance change P · W ± 0.01 → +0.01 0	
Alterations to full length	LC	Full length change (reduction in tip length) LC < L 0.1 mm increments ⊗ Tip length B is reduced by (L - LC). (If combined with LKC, 0.01 mm increments can be selected.) ⊗ Projection length of jector pin is 2 mm.		
	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.		
	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.		
	LKC	Full length tolerance change L + 0.3 → +0.05 0		
	TKC	Head thickness tolerance change T + 0.3 → +0.02 0	Full length tolerance change L + 0.3 → +0.1 0	
	TKM	Head thickness tolerance change T + 0.3 → +0.02 0	Full length tolerance change L + 0.3 → +0.1 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.	
	KFC	Double key flats at 0° and a selected angle ⊗ Cannot be combined with KC-WKC.	Double key flats at 0° and a selected angle ⊗ Cannot be combined with KC-WKC.	
	NKC	No key flat		
	HC	Head diameter change D ≤ HC < H 0.1 mm increments		
	TC	Head thickness change 0.1 mm increments (if combined with TKC-TKM-LCT-LMT, 0.01 mm increments can be selected.) ⊗ Full length L is shortened by (5-TC). If combined with LC-LCT-LMT, full length remains as specified.		
	TKC	Head thickness tolerance change T + 0.3 → +0.02 0		
TKM	Head thickness tolerance change T + 0.3 → +0.02 0			
TCC	Chamfering of head This improves the strength of the punch head. P.1611			
TCC	Head thickness change 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 types.			
Alterations to shank	SKK	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 combined with KC-WKC-KFC.		
	AC	The jector pin is removed to create an air path and the side vent hole is plugged from the inside by inserting a resin (ABS) ring.		
	NC	The jector pin is removed. ⊗ Cannot be combined with AC.		
	NDC	No press-in lead ℓ ≥ 3 → ℓ = 0		

Price **Quotation**