

# JECTOR PUNCHES

— RW 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.		Shape	B	The tip shape can be selected from figure below. Tip shape A~G in the figure below.
		Type	Shape			
		Shank dia. Dm5	Shank dia. D <sup>+0.005</sup>	Tip shape	Tip length	
 Powdered highspeed steel 64~67HRC Surface 3100HV  For shank diameter tolerance D <sup>+0.005</sup> select either m5 or 0.	 Spring reinforced type RW—PJ RW—PJV	RW—PJ	ARW—PJ	A	S	 The tip edges are very slightly rounded.
				D	L	
				E	L	
				G	L	

  

Tip shape A

$P \geq W$   
 $K = \sqrt{P^2 + W^2}$

Tip shape D

$R \leq 0.2$   
 $W \pm 0.01$   
 $P \geq W$   
 $K = \sqrt{P^2 + W^2}$

Tip shape R

$P \geq W$   
 $0.15 \leq R < \frac{W}{2}$   
 $K = \sqrt{(P-2R)^2 + (W-2R)^2} + 2R$

Tip shape E

$P > W$

Tip shape G

$P > W$

Catalog No.		L										0.01mm increments				B	H	
Type	Shape											A	D	R	E			G
		Tip length	D											min. P	max. P	P-Kmax.	P-Wmin.	R
(Dm5) Spring reinforced type RW—PJ RW—PJV	A	S	(4)	40	50	60	70	80	1.00	3.99	3.97	1.00	$0.15 \leq R < \frac{W}{2}$ (R only)	8	7			
			(5)	40	50	60	70	80	2.00	4.99	4.97	2.00			8			
			(6)	40	50	60	70	80	2.00	5.99	5.97	2.00			9			
			8	(40)	50	60	70	80	90	100	3.00	7.99			7.97	3.00	11	
			10	(40)	50	60	70	80	90	100	3.00	9.99			9.97	3.00	13	
			13	(40)	50	60	70	80	90	100	6.00	12.99			12.97	6.00	16	
			16	(40)	(50)	60	70	80	90	100	10.00	15.99			15.97	6.00	19	
			20	(40)	(50)	60	70	80	90	100	13.00	19.99			19.97	6.00	23	
			25	(40)	(50)	60	70	80	90	100	18.00	24.99			24.97	6.00	28	
			(D <sup>+0.005</sup> ) Spring reinforced type ARW—PJ ARW—PJV	A	L	(4)	50	60	70	80	1.00	3.99			3.97	2.00	$0.15 \leq R < \frac{W}{2}$ (R only)	13
(5)	50	60				70	80	2.00	4.99	4.97	2.00	8						
(6)	50	60				70	80	2.00	5.99	5.97	2.00	9						
8	50	60				70	80	90	100	3.00	7.99	7.97	3.00	11				
10	50	60				70	80	90	100	3.00	9.99	9.97	3.00	13				
13	50	60				70	80	90	100	6.00	12.99	12.97	6.00	16				
16	60	70				80	90	100	10.00	15.99	15.97	6.00	19					
20	60	70				80	90	100	13.00	19.99	19.97	6.00	23					
25	60	70				80	90	100	18.00	24.99	24.97	6.00	28					

The spring constants of RW—PJV, ARW—PJV are twice those of RW—PJ, ARW—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<sup>-0.01</sup><sub>-0.03</sub> (press-in lead) is not included.  
 D R E G: P-K>D-0.05→ℓ=0 If P-K>D-0.05 for a shaped punch, D<sup>-0.01</sup><sub>-0.03</sub> (press-in lead) is not included.  
 D(4), (5), and (6) are specifications available for RW—PJ, ARW—PJ only. Spring reinforced types are available for D8~25 only.

Order **Catalog No.** — **L** — **P** — **W** — **R (R only)**  
 RW—PJEL 10 — 70 — P8.50 — W4.25

Days to Ship **Quotation**

**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.

**Effects of RW coating**  
Effective for press processing of ultra-high-tensile material and thick plate high-tensile material thanks to its superior wear resistance, peeling resistance and heat resistance. See the product data for details. **P.1607**

Alterations **Catalog No.** — **L(LC·LCT·LMT)** — **P(PC)** — **W(WC)** — **R** — **(BC·HC·TC...etc.)**  
 RW—PJDS 6 — LC58 — P3.00 — W2.80 — HC8—KC45

Alterations	Code	A	D R E G	1Code																																							
Alterations to tip	PC WC	Tip dimension change $PC \geq PCmin$ 0.01mm increments <table border="1"> <tr><th>D</th><th>PCmin</th></tr> <tr><td>4</td><td>1,000</td></tr> <tr><td>5</td><td>1,800</td></tr> <tr><td>6</td><td>1,800</td></tr> <tr><td>8</td><td>2,500</td></tr> <tr><td>10</td><td>2,800</td></tr> <tr><td>13</td><td>5,000</td></tr> <tr><td>16</td><td>8,000</td></tr> <tr><td>20</td><td>9,000</td></tr> <tr><td>25</td><td>9,000</td></tr> </table>	D	PCmin	4	1,000	5	1,800	6	1,800	8	2,500	10	2,800	13	5,000	16	8,000	20	9,000	25	9,000	Tip dimension change $PC \cdot WC \geq PC \cdot WCmin$ 0.01mm increments * Cannot be used for D4. <table border="1"> <tr><th>D</th><th>PC·WCmin</th></tr> <tr><td>5</td><td>1.80</td></tr> <tr><td>6</td><td>1.80</td></tr> <tr><td>8</td><td>2.50</td></tr> <tr><td>10</td><td>2.80</td></tr> <tr><td>13</td><td>5.00</td></tr> <tr><td>16</td><td>5.00</td></tr> <tr><td>20</td><td>5.00</td></tr> <tr><td>25</td><td>5.00</td></tr> </table>	D	PC·WCmin	5	1.80	6	1.80	8	2.50	10	2.80	13	5.00	16	5.00	20	5.00	25	5.00		
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25	5.00																																										
BC	Tip length change (shorter than standard) $2 \leq BC < B$ 0.1mm increments																																										
PRC	Rounding of tip side edge $0.3 \leq PRC \leq 1$ 0.1mm increments * $PRC \leq (P-d_1-0.5)/2$ d1 dimension <b>P.236</b>																																										
LC	Full length change (reduction in tip length) $LC < L$ 0.1mm increments * Tip length B is reduced by $(L-LC)$ . (If combined with LKC, 0.01mm increments can be selected.) * Projection length of jector pin is 2mm.																																										
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 (A) 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 (A) are the same as for LC.																																									
	LKC	Full length tolerance change $L^{+0.3}_0 \Rightarrow +0.05_0$																																									
	LTC	Full length tolerance change $L^{+0.3}_0 \Rightarrow +0.1_0$																																									

Alterations	Code	A	D R E G	1Code
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 1° increments * Cannot be combined with KC-WKC.	Double key flats at 0° and a selected angle 1° increments * Cannot be combined with KC-WKC.	
	NKC	—	No key flat	
	HC	Head diameter change $D \leq HC < H$ 0.1mm increments * Cannot be used for retainer set products		
	TC	Head thickness change 0.1mm increments (If combined with TKC-TKM-LCT-LMT, 0.01mm increments can be selected.) * Full length L is shortened by $(5-TC)$ . If combined with LC-LCT-LMT, full length remains as specified. * Cannot be used for retainer set products		
Alterations to shank	TKC	Head thickness tolerance change $T^{+0.3}_0 \Rightarrow +0.02_0$		
	TKM	Head thickness tolerance change $T^{+0.3}_0 \Rightarrow -0.02_0$		
	TCC	Chamfering of head This improves the strength of the punch head. <b>P.1611</b> 0.1mm increments $0.5 \leq TCC \leq (H-D)/2$ * If $H \leq 5$ , then TCC is 0.5.		
	RC	Head thickness is machined to a tolerance of $-0.04 \sim 0$ relative to the retainer surface. * Cannot be used for D <sup>+0.005</sup>		
	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 $\ell \geq 3 \Rightarrow \ell=0$			

**P** Price **Quotation**