

JECTOR PUNCHES

— DLC COATING —

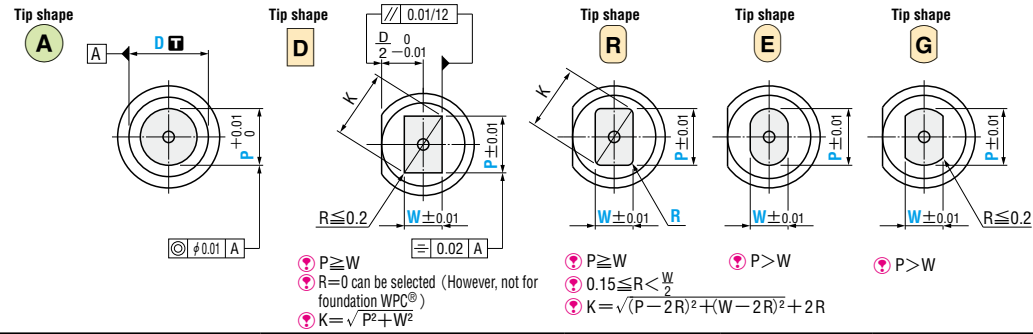
PRODUCTS DATA

P.1604~1605

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	Shank diameter D Tolerance	M	Catalog No.		Shape Tip shape	B Tip length	The tip shape can be selected from figure below. Tip shape A~G in the figure below.
			Type Without foundation	Foundation WPC®			
RoHS WPC® treatment	D _{m5}	Powdered highspeed steel 64~67HRC Surface 3000HV and above	N-PJ	NW-PJ	A	S	
			Spring reinforced type N-PJV	Spring reinforced type NW-PJV	D		
For shank diameter tolerance D select either m5 or +0.005/0	D +0.005/0	Powdered highspeed steel 64~67HRC Surface 3000HV and above	AN-PJ	ANW-PJ	E	L	<ul style="list-style-type: none"> The tip end is ground before the coating is applied. The tip edges of foundation WPC® are slightly rounded.
			Spring reinforced type AN-PJV	Spring reinforced type ANW-PJV	G		



Type	Shape Tip shape	B Tip length	D	0.01mm increments								B	H		
				L				R							
				min.	P max.	P · Kmax.	P · Wmin.	R	R	R	R				
(D _{m5}) N-PJ Spring reinforced type (D8~25) N-PJV (D +0.005) AN-PJ Spring reinforced type (D8~25) AN-PJV Foundation WPC® (D _{m5}) NW-PJ Spring reinforced type NW-PJV (D +0.005) ANW-PJ Spring reinforced type ANW-PJV	A D R E G	S L	(4)	40	50	60	70	80	1.00 ~ 3.99	3.97	1.00	0.15 ≤ R < W/2 (R only)	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
			(4)		50	60	70	80			1.00 ~ 3.99		3.97	2.00	7
(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 N-PJV, NW-PJV, AN-PJV, ANW-PJV are twice those of N-PJ, NW-PJ, AN-PJ, ANW-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: 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 N-PJ, NW-PJ, AN-PJ, ANW-PJ only. Spring reinforced types are available for D8~25 only.

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

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·LMT — (P)PC — (W)WC — R — (BC·HC·TC...etc.)
N—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 ≥ PCmin 0.01mm increments (If combined with PKC, 0.001mm increments can be selected.)	Tip dimension change PC·WC ≥ PC·WCmin 0.01mm increments * Cannot be used for D4.																																				
		<table border="1"> <tr><th>D</th><th>PCmin</th></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	5	1.800	6	1.800	8	2.500	10	2.800	13	5.000	16	8.000	20	9.000	25	9.000	<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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BC	Tip length change (shorter than standard) 2 ≤ BC < B 0.1mm increments																																						
	<table border="1"> <tr><th>PC·WC</th><th>Bmax</th></tr> <tr><td>1.80 ~ 1.99</td><td>20</td></tr> </table>	PC·WC	Bmax	1.80 ~ 1.99	20																																		
PC·WC	Bmax																																						
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PRC	Rounding of tip side edge 0.3 ≤ PRC ≤ 1 0.1mm increments * PRC ≤ (P - d1 - 0.5)/2 d1 dimension P.236 * Cannot be combined with PCC. * It is PRC ± 0.1 for foundation WPC®																																						
PCC	Chamfering to tip side edge 0.3 ≤ PCC ≤ 1 0.1mm increments * PCC ≤ (P - d1 - 0.5)/2 d1 dimension P.236 * Cannot be combined with PRC. * Cannot be used for foundation WPC®																																						
PKC	Tip tolerance change P + 0.01 → +0.005 0 → 0 * (P dimension can be selected in 0.001mm increments.)	Tip tolerance change P·W ± 0.01 → +0.01 0 → 0																																					
	Tip lapping * P dimension tolerance & increments remain unchanged. Raw material before coating is treated. * Tip shape corner R=0 cannot be selected * Cannot be combined with foundation WPC®																																						
Alterations to full length	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.																																					
	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 (P) are the same as for LC. TKC Head thickness tolerance change + Full length tolerance change T + 0.3 → +0.02 0 → 0 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 (P) are the same as for LC. TKM Head thickness tolerance change + Full length tolerance change T + 0.3 → -0.02 0 → 0 L + 0.3 → +0.1 0 → 0																																					

Alterations	Code	A	D R E G	1Code
Full length	LKC	Full length tolerance L + 0.3 → +0.05 0 → 0		
		Key flat position change 90°/180°/270° 1° increments		
Alterations to head	KFC	Double key flats at 0° and a selected angle 1° increments * Cannot be combined with KC·WKC.	Double key flats in parallel Can be combined with KC.	
		Double key flats at 0° and a selected angle 1° increments * Cannot be combined with KC·WKC.	No key flat	
Alterations to shank	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.		
		The jector pin is removed. * Cannot be combined with AC.		
Alterations to shank	NDC	No press-in lead ℓ ≥ 3 → ℓ = 0		

Price Quotation