

KEY FLAT SHANK JECTOR PUNCHES

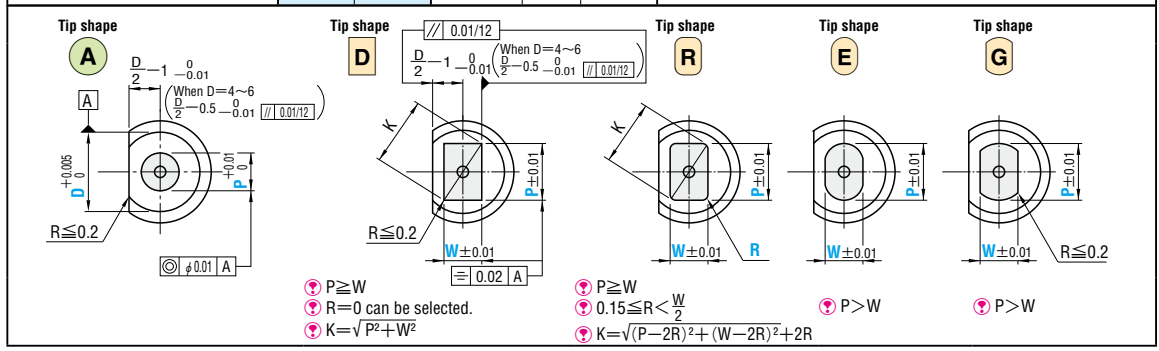
—NORMAL · TiCN COATING—



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	Shank diameter D tolerance	M H	Catalog No.		The tip shape can be selected from Tip shape A~G in the figure below.	
			Type	Tip shape	Tip length B	Tip length
—Normal—	D ⁺ 0.005 0	D4~6 Equivalent to SKH51 61~64HRC D8~25 Equivalent to SKD11 60~63HRC	G-SJ G-SJV	A	S	
			G-PJ G-PJV	D	L	
			GH-PJ GH-PJV	E	X	
			TiCN coating			
			Powdered high-speed steel 64~67HRC Surface 3000HV			



Type	Catalog No.	Tip shape	Tip length B	D	0.01mm increments										B	H
					A					D R E G						
					min.	P max.	P-Kmax.	W max.	P-Wmin.	R						
G-SJ G-PJ	S	(4)	40	50	60	70	80	1.00~	2.80	3.97	2.80	1.00	8	7		
		(5)	40	50	60	70	80	2.00~	3.80	4.97	3.80	2.00		8		
		(6)	40	50	60	70	80	2.00~	4.80	5.97	4.80	2.00		9		
		8	(40)	50	60	70	80	90	100	3.00~	5.80	7.97		5.80	3.00	11
		10	(40)	50	60	70	80	90	100	3.00~	7.80	9.97		7.80	3.00	13
		13	(40)	50	60	70	80	90	100	6.00~	10.80	12.97		10.80	6.00	16
		16	(40)	(50)	60	70	80	90	100	10.00~	13.80	15.97		13.80	6.00	19
		20	(40)	(50)	60	70	80	90	100	13.00~	17.80	19.97		17.80	6.00	23
		25	(40)	(50)	60	70	80	90	100	18.00~	22.80	24.97		22.80	6.00	28
		—TiCN coating— GH-PJ	A D R E G	(4)	50	60	70	80	1.00~	2.80	3.97	2.80		2.00	13	7
(5)	50			60	70	80	2.00~	3.80	4.97	3.80	2.00	8				
(6)	50			60	70	80	2.00~	4.80	5.97	4.80	2.00	9				
8	50			60	70	80	90	100	3.00~	5.80	7.97	5.80	3.00	11		
10	50			60	70	80	90	100	3.00~	7.80	9.97	7.80	3.00	13		
13	50			60	70	80	90	100	6.00~	10.80	12.97	10.80	6.00	16		
16	60			70	80	90	100	10.00~	13.80	15.97	13.80	6.00	19			
20	60			70	80	90	100	13.00~	17.80	19.97	17.80	6.00	23			
25	60			70	80	90	100	18.00~	22.80	24.97	22.80	6.00	28			
Spring reinforced type (D8~25) GH-PJV	L			(5)	60	70	80	2.00~	3.80	4.97	3.80	3.50	19	8		
		(6)	60	70	80	2.00~	4.80	5.97	4.80	3.50	9					
		8	70	80	90	100	3.00~	5.80	7.97	5.80	5.00	11				
		10	70	80	90	100	3.00~	7.80	9.97	7.80	6.00	13				
		13	70	80	90	100	6.00~	10.80	12.97	10.80	6.00	16				
		16	80	90	100	10.00~	13.80	15.97	13.80	6.00	19					
		20	80	90	100	13.00~	17.80	19.97	17.80	6.00	23					
		25	80	90	100	18.00~	22.80	24.97	22.80	6.00	28					
		G-SJ Spring reinforced type (D8~25) G-SJV	X	(5)	60	70	80	2.00~	3.80	4.97	3.80	3.50		30	8	
				(6)	60	70	80	2.00~	4.80	5.97	4.80	3.50			9	
8	70			80	90	100	3.00~	5.80	7.97	5.80	5.00	11				
10	70			80	90	100	3.00~	7.80	9.97	7.80	6.00	13				
13	70			80	90	100	6.00~	10.80	12.97	10.80	6.00	16				
16	80			90	100	10.00~	13.80	15.97	13.80	6.00	19					
20	80			90	100	13.00~	17.80	19.97	17.80	6.00	23					
25	80			90	100	18.00~	22.80	24.97	22.80	6.00	28					

The spring constants of G-SJV, G-PJV, and GH-PJV are twice those of G-SJ, G-PJ, and G-SJ respectively.
L(40)→B=6 If full length is (40), tip length is 6 mm in all cases.
L(50)→B=13 If full length is (50), tip length is 13mm in all cases.
D 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 G-SJ, G-PJ, and GH-PJ only. Spring reinforced types are available for D8~25 only.
D=4~6→a=0.5 When D dimension is 4~6, dimension a is 0.5mm.
D=8~25→a=1 When D dimension is 8~25, dimension a is 1mm.

Order **Catalog No.** — L — P — W — R (R only)
G-SJDS 6 — 60 — P3.00 — W2.80

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.)
G-SJDS 6 — LC58 — P3.00 — W2.80 — HC8

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.) ⊗ D4 cannot be used with TiCN coating.	Tip dimension change PC·WC ≥ PC·WCmin. 0.01 mm increments ⊗ Cannot be used for tip X. ⊗ Cannot be used for tip Y.																																						
		<table border="1"> <tr><th>D</th><th>PCmin.</th></tr> <tr><td>4</td><td>0.900</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	0.900	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 0.1 mm increments ⊗ The following restriction applies to tip type X with D dimension of 5 or 6.																																								
SC	Lapping of tip ⊗ P dimension tolerance and increment are the same. ⊗ With TiCN coating, the base material is finished before the coating is applied. ⊗ R=0 cannot be selected for the tip shape D corners.																																								
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 to 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-W ± 0.01 → +0.01 ⊗ (P dimension can be selected in 0.01 mm increments.) ⊗ TiCN coating cannot be used for D>13.	Tip tolerance change L+0.3 → +0.1 L+0.3 → +0.1																																							
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-LKZ, 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.	Full length tolerance change L+0.3 → +0.02 + Full length change + L+0.3 → +0.1																																						
	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.	Full length tolerance change L+0.3 → +0.02 + Full length change + L+0.3 → +0.1																																						
	LKC	Full length tolerance change L+0.3 → +0.05																																							
	LKZ	Full length tolerance change L+0.3 → +0.01 ⊗ Cannot be used with TiCN coating.																																							

Alteration	Code	A	D R E G	1Code
Alterations to head	WKC		Addition of double key flats in parallel	
	HC	Head diameter change D ≤ HC < H 0.1 mm increments		
	TC	Head thickness change 3.5 ≤ TC < 5 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 → 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 1.80~1.99 20		
	SKF	Single key flat on shank, configurable size SKF -0.01 P ≤ 2 (SKF-0.1) W ≤ 2 (SKF-0.1) 0.1 mm increments 0.1 mm increments D4~6 D/2-0.5 ≤ SKF ≤ D/2-0.1 D8~25 D/2-1.0 ≤ SKF ≤ D/2-0.1 ⊗ Cannot be combined with WKC.		
	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**

PUNCHES

Quotation