

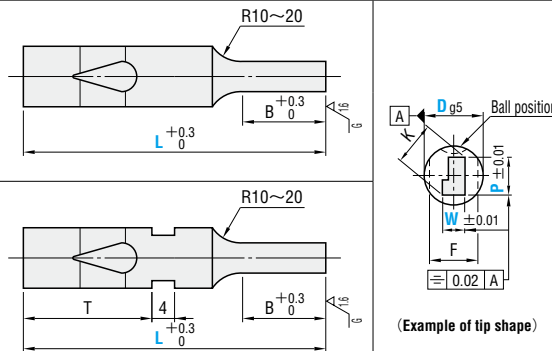






# SPECIAL SHAPED BALL-LOCK PUNCHES

Type	Applicable shank diameter	M	H	Type	Tip shape  Select from the shapes shown on P.715. <b>RoHS</b>
	Light load	Equivalent to SKD11	60~63HRC	<b>ELP</b>	 (Example of tip shape)
	Heavy load	Equivalent to SKH51	61~64HRC	<b>EBP</b>	
	Light load	Equivalent to SKD11	60~63HRC	<b>KLP</b>	
	Heavy load	Equivalent to SKH51	61~64HRC	<b>KBP</b>	



Catalog No.			L	P-K max.	P-W min.	B	T	F
Type	Shape	D						
Light load <b>ELP</b> <b>KLP</b>	2H~12H	10	63 71 74 80 90	9.90	2.50	13	27	8
		13		12.90	3.00			10
	2J~18J	16		15.90	4.00			13
		20		19.90	5.00			17
	3K~29K	25		24.90	6.00			22
		32		31.90	7.00			29
Heavy load <b>EBP</b> <b>KBP</b>	8L (KLP only)	10	71 80 90 100	9.90	2.50	13	36	8
		13		12.90	3.00			10
	Tip shape  Select from the shapes shown on P.715.	16		15.90	4.00			13
		20		19.90	5.00			17
	25	24.90		6.00	22			
		32		31.90	7.00			29

 The wrench flat is used to check that the punch is correctly locked in place.  P.796




 Order Catalog No. — L — P-W-A-B-C-Q-R-S...0.01mm increments  
ELP3K 25 — 80 — P18.00—W16.00—A8.00

 Days to Ship **Quotation**

 Alterations  Catalog No. — L (LC) — P-W-A-B-C-Q... — (BC-KC, etc.)  
ELP3K 25 — LC73 — P18.00—W16.00—A8.00 — BC13

Alteration	Code	Spec.	1Code							
	<b>LC</b>	Full length change $50+B(BC) \leq LC < L$ 0.1mm increments * If difference between full length and tip length is 50mm or less, tip length is adjusted to (Full length—50mm) (or to (Full length—45mm) for light load punches). * If D=32 for shapes 9J~13J·16J·K·L, tip length B is as indicated in the table at right.	<b>Quotation</b>							
		<table border="1"> <thead> <tr> <th>L (LC)</th> <th>Bmax D32</th> </tr> </thead> <tbody> <tr> <td>50.0~59.9</td> <td>6</td> </tr> <tr> <td>60.0~69.9</td> <td>13</td> </tr> <tr> <td>70.0~79.9</td> <td>19</td> </tr> <tr> <td>80.0~</td> <td>19</td> </tr> </tbody> </table>		L (LC)	Bmax D32	50.0~59.9	6	60.0~69.9	13	70.0~79.9
L (LC)	Bmax D32									
50.0~59.9	6									
60.0~69.9	13									
70.0~79.9	19									
80.0~	19									
	<b>LKC</b>	Full length tolerance change $L +0.3/0 \rightarrow +0.05/0$								

 Price **Quotation**

Alteration	Code	Spec.	1Code							
	<b>BC</b>	Tip length change $2 \leq BC \leq Bmax$ 0.1mm increments * Full length L must be at least 50mm (45mm for light load punches) longer than tip length BC.	<b>Quotation</b>							
		<table border="1"> <thead> <tr> <th>P-W</th> <th>Bmax</th> </tr> </thead> <tbody> <tr> <td>2.50~2.99</td> <td>13</td> </tr> <tr> <td>3.00~3.99</td> <td>19</td> </tr> <tr> <td>4.00~4.99</td> <td>25</td> </tr> <tr> <td>5.00~</td> <td>30</td> </tr> </tbody> </table>		P-W	Bmax	2.50~2.99	13	3.00~3.99	19	4.00~4.99
P-W	Bmax									
2.50~2.99	13									
3.00~3.99	19									
4.00~4.99	25									
5.00~	30									
	<b>PKC</b>	Tip tolerance change $P-W \pm 0.01 \rightarrow +0.01/0$ * Cannot be used for D=32.								
	<b>KC</b>	Ball position change $0^\circ \rightarrow 90^\circ$ * 1° increments								