

PUNCHES WITH LOCATING DOWEL HOLES

— FINISHED FOR RETAINERS · RW COATING —



Type	A	Shank diameter D tolerance	M	Catalog No.				The tip shape can be selected from [Tip shape] A~G in the figure below.
				Type	Shape Tip shape	B Tip length	with dowel hole	
With locating dowel hole RW coating	Dowel pin D10~32 MS6-25 D38-45 SJB-CMS	Dm5	Equivalent to SKD11 60~63HRC Surface 3100HV	RW-SP	A D R E G	S L X	-C	<p>The tip edges are very slightly rounded. Tip length (B) X>L>S</p>

Tip shape A

Tip shape D

Tip shape R

Tip shape E

Tip shape G

Catalog No. Type	D	L													B	H										
		0.01mm increments																								
		A		D R E G		R																				
RW-SP□S-C	10	(40)	50	60	70	80	90	100	110	120	130	140	150	3.00	~	9.99	9.97	2.50	13	13						
	13	(40)	50	60	70	80	90	100	110	120	130	140	150	6.00	~	12.99	12.97	3.00			19	16				
	16	(40)	50	60	70	80	90	100	110	120	130	140	150	10.00	~	15.99	15.97	4.00					19	19		
	20	(40)	50	60	70	80	90	100	110	120	130	140	150	13.00	~	19.99	19.97	5.00							25	23
	25	(40)	50	60	70	80	90	100	110	120	130	140	150	18.00	~	24.99	24.97	6.00								
RW-SP□L-C	10		50	60	70	80	90	100	110	120	130	140	150	3.00	~	9.99	9.97	2.50	19	13						
	13		50	60	70	80	90	100	110	120	130	140	150	6.00	~	12.99	12.97	3.00			25	16				
	16		60	70	80	90	100	110	120	130	140	150	10.00	~	15.99	15.97	4.00	30					19			
	20		60	70	80	90	100	110	120	130	140	150	13.00	~	19.99	19.97	5.00							40	23	
	25		60	70	80	90	100	110	120	130	140	150	18.00	~	24.99	24.97	6.00									40
RW-SP□X-C	10		70	80	90	100	110	120	130	140	150	6.00	~	9.99	9.97	5.00	-		13							
	13		70	80	90	100	110	120	130	140	150	6.00	~	12.99	12.97	5.00				-	16					
	16		80	90	100	110	120	130	140	150	10.00	~	15.99	15.97	5.00	-		19								
	20		80	90	100	110	120	130	140	150	13.00	~	19.99	19.97	5.00							-	23			
	25		80	90	100	110	120	130	140	150	18.00	~	24.99	24.97	5.00									-	28	

Ⓛ(40): If full length is (40), tip length is 8mm in all cases.
 Ⓜ: P>D-0.03 → ℓ=0 If P>D-0.03 for a round punch, D^{-0.01}_{-0.03} (press-in lead) is not included.
 Ⓝ Ⓞ Ⓟ Ⓠ Ⓡ Ⓢ Ⓣ Ⓤ Ⓥ Ⓦ Ⓧ Ⓨ Ⓩ: P·K>D-0.05 → ℓ=0 If P·K>D-0.05 for a shaped punch, D^{-0.01}_{-0.03} (press-in lead) is not included.

Order - - - - **RW-SPAS-C 25 - 100 - P18.05**

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**

Example Uses of punches with locating dowel holes.....
 This type of punch is mainly used with dies for parts such as automobile bodies, in combination with a retainer that holds the punch. Rather than indirect positioning using the retainer dowel hole, these punches can be positioned directly using the dowel hole machined on the punch axis, improving die accuracy. These punches are particularly effective when used for die machining with NC machines. This type of punch can be also used with dies for the external panels of electrical appliances, either in combination with a retainer, or attached to the punch plate of an ordinary progressive die.



Days to Ship **Quotation**

Alterations - - - - - (BC-HC-TC...etc.) -

Alterations	Code	A	D R E G	1Code																								
Alterations to tip	PC WC	Tip dimension change PC ≥ $\frac{P_{min}}{2}$ 0.01mm increments	Tip dimension change PC ≥ $\frac{P \cdot W_{min}}{2}$ 0.01mm increments ⊗ Cannot be used for tip X.	<table border="1"> <tr> <th>P(PC)</th> <th>Bmax</th> <th>P(PC)-W(WC)</th> <th>Bmax</th> </tr> <tr> <td>1.500~1.999</td> <td>20</td> <td>1.25~1.49</td> <td>8</td> </tr> <tr> <td>2.000~3.999</td> <td>35</td> <td>1.50~1.99</td> <td>13</td> </tr> <tr> <td>4.000~5.999</td> <td>45</td> <td>2.00~3.49</td> <td>19</td> </tr> <tr> <td>6.000~</td> <td>60</td> <td>3.50~4.99</td> <td>25</td> </tr> <tr> <td></td> <td></td> <td>5.00~</td> <td>30</td> </tr> </table>	P(PC)	Bmax	P(PC)-W(WC)	Bmax	1.500~1.999	20	1.25~1.49	8	2.000~3.999	35	1.50~1.99	13	4.000~5.999	45	2.00~3.49	19	6.000~	60	3.50~4.99	25			5.00~	30
		P(PC)	Bmax		P(PC)-W(WC)	Bmax																						
1.500~1.999	20	1.25~1.49	8																									
2.000~3.999	35	1.50~1.99	13																									
4.000~5.999	45	2.00~3.49	19																									
6.000~	60	3.50~4.99	25																									
		5.00~	30																									
Alterations to full length	LC LKC	Tip length change 2 ≤ BC ≤ Bmax 0.1mm increments Ⓢ Full length L must be at least 25mm longer than tip length BC.	Tip length change 2 ≤ BC ≤ Bmax 0.1mm increments Ⓢ Full length L must be at least 30mm longer than tip length BC.	Quotation																								
		Rounding of tip side edge 0.3 ≤ PRC ≤ 1 0.1mm increments Ⓢ PRC ≤ (P-0.2)/2																										

Price **Quotation**

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	Quotation										
	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 ≤ HC < H 0.1mm increments ⊗ Cannot be used for retainer set products												
Alterations to shank	TC	Head thickness change 2 ≤ TC < 5 0.1mm increments Ⓢ Full length L is shortened by (5-TC). ⊗ If combined with LC, full length is equal to LC. ⊗ Cannot be used for retainer set products		Quotation										
	TCC	Chamfering of head This improves the strength of the punch head. P.1611 0.1mm increments 0.5 ≤ TCC ≤ (H-D)/2												
	UC	Modification for urethane stripper (USN) installation <table border="1"> <tr> <th>Code</th> <th>U</th> <th>L</th> <th>Applicable USN</th> </tr> <tr> <td>UC40</td> <td>37</td> <td>L ≥ 80</td> <td>USN40</td> </tr> <tr> <td>UC50</td> <td>47</td> <td>L ≥ 90</td> <td>USN50</td> </tr> </table>	Code		U	L	Applicable USN	UC40	37	L ≥ 80	USN40	UC50	47	L ≥ 90
Code	U	L	Applicable USN											
UC40	37	L ≥ 80	USN40											
UC50	47	L ≥ 90	USN50											