

BLOCK PUNCHES

Material	Catalog No.		Tip shape	Tip length
	Type	Tip shape		
(H3 ~ 5) Equivalent to SKH51 61 ~ 64HRC	HP	D	S	L
(H6 ~ 30) Equivalent to SKD11 60 ~ 63HRC				
Equivalent to SKH51 61 ~ 64HRC				
Powdered high-speed steel 64 ~ 67HRC	PHP	G	L	L

Tip shape D

$H \begin{matrix} +0.01 \\ 0 \end{matrix}$

$V \begin{matrix} +0.01 \\ 0 \end{matrix}$

$W \pm 0.01$

$R \leq 0.2$

$P \begin{matrix} +0.01 \\ 0 \end{matrix}$

$W \leq P \leq W \times 20$

$R=0$ can be selected.

Tip shape R

$H \begin{matrix} +0.01 \\ 0 \end{matrix}$

$V \begin{matrix} +0.01 \\ 0 \end{matrix}$

$W \pm 0.01$

$R \leq 0.2$

$P \begin{matrix} +0.01 \\ 0 \end{matrix}$

$W \leq P \leq W \times 20$

$0.15 \leq R < W/2$

0.01mm increments

Tip shape E

$H \begin{matrix} +0.01 \\ 0 \end{matrix}$

$V \begin{matrix} +0.01 \\ 0 \end{matrix}$

$W \pm 0.01$

$R \leq 0.2$

$P \begin{matrix} +0.01 \\ 0 \end{matrix}$

$W \leq P \leq W \times 20$

Tip shape G

$H \begin{matrix} +0.01 \\ 0 \end{matrix}$

$V \begin{matrix} +0.01 \\ 0 \end{matrix}$

$W \pm 0.01$

$R \leq 0.2$

$P \begin{matrix} +0.01 \\ 0 \end{matrix}$

$W < P \leq W \times 20$

Even when $P=W$ and $W=H$, the tip tolerance is determined by the P and W tolerances.

Type	Tip shape	Tip length	H	V	P min.	W min.	V																L	B	
							3	4	5	6	8	10	13	16	20	22	25	28	30	(40)	(50)	6		8	
HP	D	S	(3)	1.0																	(40)				
			(4)	1.0																		(50)			
			5	1.2																					
HSP (H6 ~ 30)	R	S	6	1.5																					
			8	2.0																					
			10	2.5																					
PHP	G	L	13	3.0																					
			16	4.0																					
			20	5.0																					
			22	6.0																					
			25	6.5																					
			28	7.0																					
30	7.5																								

Ⓛ (40) · H10 ~ 30 · B=13 If full length is (40) and H dimension is 10 ~ 30, tip length is 13mm in all cases.
 Ⓛ (50) · H16 ~ 30 · B=19 If full length is (50) and H dimension is 16 ~ 30, tip length is 19mm in all cases.
 Ⓛ If H is (3) or (4), full length L is 40 ~ 80 for HP types or 40 ~ 70 for PHP types.
 Ⓛ V (40) and (50) are specifications available for HP types only.

Order

(1) If tip is at center of shank

Catalog No. V H L — 0.01mm increments — P — W — R (R only)

PHPES 08 06 — 60 — P7.62 — W3.81

(2) If tip is not at center of shank

Catalog No. V H L — 0.01mm increments — P — W — R (R only) — X — Y

PHPES 20 10 — 60 — P14.05 — W6.05 — X0.00 — Y0.50

X and Y must be set either to 0 or to 0.02 or more. Tolerance ±0.01

Days to Ship **Quotation**

Alterations Catalog No. V H L (LC) — P (PC) — W (WC) — R — X — Y — (BC-PKC, etc.)

PHPES 20 10 — LC65.5 — P16.00 — W8.00 — BC15.5 — VHZ

P Price **Quotation**

Alteration	Code	Spec.	1Code														
Alterations to tip	PC	Tip dimension change $PC \geq V \times 0.3 \geq 1.00$ $WC \geq H \times 0.15 \geq 0.50$ 0.01mm increments															
	WC																
	BC	Tip length change $2 \leq BC \leq B_{max}$ 0.1mm increments	<table border="1"> <tr> <th>W (WC)</th> <th>Bmax</th> </tr> <tr> <td>0.50 ~ 0.99</td> <td>4</td> </tr> <tr> <td>1.00 ~ 1.19</td> <td>8</td> </tr> <tr> <td>1.20 ~ 1.99</td> <td>13</td> </tr> <tr> <td>2.00 ~ 2.99</td> <td>20</td> </tr> <tr> <td>3.00 ~ 4.99</td> <td>30</td> </tr> <tr> <td>5.00 ~</td> <td>35</td> </tr> </table>	W (WC)	Bmax	0.50 ~ 0.99	4	1.00 ~ 1.19	8	1.20 ~ 1.99	13	2.00 ~ 2.99	20	3.00 ~ 4.99	30	5.00 ~	35
	W (WC)	Bmax															
0.50 ~ 0.99	4																
1.00 ~ 1.19	8																
1.20 ~ 1.99	13																
2.00 ~ 2.99	20																
3.00 ~ 4.99	30																
5.00 ~	35																
SC	Lapping of tip $W \geq 2.00$ P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip D corner.																
Alterations to full length	PKC	Tip tolerance change $P \cdot W \pm 0.01 \Rightarrow \begin{matrix} +0.01 \\ 0 \end{matrix}$															
	PKV	Tip tolerance change $P \cdot W \pm 0.01 \Rightarrow \pm 0.005$															
	LC	Full length change $30 + B (BC) \leq LC < L$ 0.1mm increments (If combined with LKC-LKZ, 0.01mm increments can be selected.) If difference between full length (LC) and tip length (B) is 30mm or less, tip length is adjusted to (Full length-30).															
	LKC	Full length tolerance change $L \begin{matrix} +0.2 \\ 0 \end{matrix} \Rightarrow \begin{matrix} +0.05 \\ 0 \end{matrix}$															
Alterations to shape	LKZ	Full length tolerance change $L \begin{matrix} +0.2 \\ 0 \end{matrix} \Rightarrow \begin{matrix} +0.01 \\ 0 \end{matrix}$															
	CC	Chamfering to four corners of shank The four corners of shank are chamfered to C0.5. The distance between shank corners and the tip must be 0.5mm or more.															
Alterations to shape	CCP	Chamfering to one corner of shank (for error prevention) One corner of shank is chamfered to C1.0. Can be used if distances a and b from tip corners to shank meet the following conditions. $a+b \geq 1.3$ ■ Selection of chamfering position CCP0 CCP90 CCP180 CCP270															
	VKM	Shank tolerance change $V \cdot H \begin{matrix} +0.01 \\ 0 \end{matrix} \Rightarrow \begin{matrix} 0 \\ -0.005 \end{matrix}$															
	VHM	Shank tolerance change $V \cdot H \begin{matrix} +0.01 \\ 0 \end{matrix} \Rightarrow \begin{matrix} 0 \\ -0.01 \end{matrix}$															
	VHZ	Shank tolerance change $V \cdot H \begin{matrix} +0.01 \\ 0 \end{matrix} \Rightarrow \pm 0.005$															
Alterations to shape	DC	Addition of press-in lead Press-in lead of 3mm ($V \cdot H \begin{matrix} -0.01 \\ -0.03 \end{matrix}$) is added.															