

# BLOCK PUNCHES

## —FLANGE STOPPER TYPE—

Material	Catalog No.		Tip shape	Tip length
	Type	Tip length		
(H3 ~ 5) Equivalent to SKH51 61 ~ 64HRC (H6 ~ 30) Equivalent to SKD11 60 ~ 63HRC	HT		D	S
Equivalent to SKH51 61 ~ 64HRC	HST (H6 ~ 28)		R E G	L
Powdered high-speed steel 64 ~ 67HRC	PHT			Tip length (B) L > S

**Tip shape D**

**Tip shape R**

**Tip shape E**

**Tip shape G**

$\text{W} \leq \text{P} \leq \text{W} \times 20$      $\text{W} \leq \text{P} \leq \text{W} \times 20$      $\text{W} \leq \text{P} \leq \text{W} \times 20$      $\text{W} < \text{P} \leq \text{W} \times 20$   
 $\text{R} = 0$  can be selected.     $0.15 \leq \text{R} < \text{W}/2$     0.01mm increments

Even when  $\text{P} = \text{V}$  and  $\text{W} = \text{H}$ , the tip tolerance is determined by the P and W tolerances.

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

$\text{B} \leq \text{L} - (\text{T} + 15)$   
 $\text{L}(40) \cdot \text{H}10 \sim 30 \rightarrow \text{B} = 13$  If full length is (40) and H dimension is 10 ~ 30, tip length is 13mm in all cases.  
 $\text{L}(50) \cdot \text{H}16 \sim 30 \rightarrow \text{B} = 19$  If full length is (50) and H dimension is 16 ~ 30, tip length is 19mm in all cases.  
 $\text{H}(3)(4) \rightarrow \text{L}40 \sim 70$  If H dimension is (3) or (4), full length L is within a range of 40 ~ 70.  
 $\text{H}(30) \text{V}(30) \rightarrow \text{HT} \square \square, \text{PHT} \square \square$  H dimension of 30 and V dimension of 30 are specifications available for HT  $\square \square$  and PHT  $\square \square$  only.

**Order** ■ Flange position: TF specification

(1) If tip is at center of V and H.

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

PHTES 08 08 — 60 — P6.00 — W4.00 — T20 — TF0

(2) If tip is not at center of V and H

Catalog No. V H L — 0.01mm increments — T — TF — 0.01mm increments

PHTEL 10 10 — 60 — P6.00 — W5.00 — T16 — TF0 — X2.00 — Y0.50

For TF0, X must be 1.5 or more. For TF90-TF180-TF270, X must be set either to 0 or to 0.02 or more.  
 For TF270, Y must be 1.5 or more. For TF0-TF90-TF180, Y must be set either to 0 or to 0.02 or more.  
 Tolerance  $\pm 0.01$

Days to Ship **Quotation** **ex** Example

Alterations Catalog No. [V] [H] [L] [P] [W] [R] [T] [TF] [X] [Y] (BC-PKC, etc.)

PHTES 10 10 — L58.5 — P8.00 — W6.00 — T20 — TF90 — HC1.0

**P** Price **Quotation**

Alteration	Code	Spec.	1Code														
Alterations to tip	WC	Tip dimension change $\text{PC} \geq \text{V} \times 0.3 \geq 1.00$ $\text{WC} \geq \text{H} \times 0.15 \geq 0.50$ 0.01mm 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																
BC	Tip length change $2 \leq \text{BC} \leq \text{Bmax.}$ 0.1mm increments Full length (L) must be at least 30mm longer than tip length (BC).																
SC	Lapping of tip $\text{W} \geq 2.00$ P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip corner.																
Alterations to full length	PKC	Tip tolerance change $\text{P} \cdot \text{W} \pm 0.01 \rightarrow +0.01$ 0															
	PKV	Tip tolerance change $\text{P} \cdot \text{W} \pm 0.01 \rightarrow \pm 0.005$															
Alterations to flange	LC	Full length change $30 + \text{B}(\text{BC}) \leq \text{LC} < \text{L}$ 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 $\text{L} +0.2 \rightarrow +0.05$ 0															
Alterations to shape	LKZ	Full length tolerance change $\text{L} +0.2 \rightarrow +0.01$ 0															
	HC	Flange width change $0 \leq \text{HC} < 1.5$ 0.1mm increments															
Alterations to shape	TC	Flange thickness change $2 \leq \text{TC} < 25$ 0.1mm increments (If combined with TKC, 0.01mm increments can be selected.)															
	TKC	Head thickness tolerance change $\text{T} -0.05 \rightarrow -0.02$ 0															
Alterations to shape	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.															
	VKC	Shank tolerance change $\text{V} \cdot (\text{H} + 1.5) +0.01 \rightarrow +0.005$ 0															
	VKM	Shank tolerance change $\text{V} \cdot (\text{H} + 1.5) +0.01 \rightarrow -0.005$ 0															
	VHM	Shank tolerance change $\text{V} \cdot (\text{H} + 1.5) +0.01 \rightarrow -0.01$ 0															
Alterations to shape	VHZ	Shank tolerance change $\text{V} \cdot (\text{H} + 1.5) +0.01 \rightarrow \pm 0.005$ 0															
	DC	Addition of press-in lead Press-in lead of 3mm ( $\text{V} \cdot (\text{H} + 1.5) -0.01$ $-0.03$ ) is added.															