

# STRAIGHT PUNCHES FOR HEAVY LOAD

—NORMAL · LAPPING—

Type	MH	Catalog No.	Shape																					
—Normal—		Normal <b>AHC</b> Lapping <b>L—AHC</b>	<p>Effective lapping range</p> <table border="1"> <thead> <tr> <th>P</th> <th>L</th> <th>(B)</th> </tr> </thead> <tbody> <tr> <td>L &lt; 25</td> <td>5</td> <td></td> </tr> <tr> <td>25 ≤ L &lt; 40</td> <td>L - 20</td> <td></td> </tr> <tr> <td>L ≥ 40</td> <td>19</td> <td></td> </tr> <tr> <td>L &lt; 25</td> <td>5</td> <td></td> </tr> <tr> <td>25 ≤ L &lt; 40</td> <td>L - 20</td> <td></td> </tr> <tr> <td>L ≥ 40</td> <td>25</td> <td></td> </tr> </tbody> </table>	P	L	(B)	L < 25	5		25 ≤ L < 40	L - 20		L ≥ 40	19		L < 25	5		25 ≤ L < 40	L - 20		L ≥ 40	25	
P	L	(B)																						
L < 25	5																							
25 ≤ L < 40	L - 20																							
L ≥ 40	19																							
L < 25	5																							
25 ≤ L < 40	L - 20																							
L ≥ 40	25																							
—Lapping—		Powdered high-speed steel 64~67HRC <b>L—APHC</b>																						

Catalog No. Type	No.	L												0.01mm increments		H	
														min.	max.		
—Normal— <b>AHC</b> <b>APHC</b>	4	40	50	60	70	80							3.00	~	4.00	9	
	5	40	50	60	70	80							4.00	~	5.00	10	
	6	40	50	60	70	80							5.00	~	6.00	11	
	8	40	50	60	70	80	90	100					6.00	~	8.00	13	
	10	40	50	60	70	80	90	100					8.00	~	10.00	15	
—Lapping— <b>L—AHC</b> <b>L—APHC</b>	13	40	50	60	70	80	90	100	110	120				10.00	~	13.00	18
	16	40	50	60	70	80	90	100	110	120				13.00	~	16.00	21
	20	40	50	60	70	80	90	100	110	120				16.00	~	20.00	25
	25	40	50	60	70	80	90	100	110	120				20.00	~	25.00	30

Order Catalog No. — L — P Days to Ship **Quotation** **P** Price **Quotation**

**AHC 6** — 40 — P5.50  
**L—APHC6** — 40 — P5.50

Alterations Catalog No. — L(LC) — P — (PKC...etc.)

**AHC 6** — LC45 — P5.50 — PKC—LKC

Alterations	Code	Spec.	1Code
Alterations to tip	<b>PRC</b>	Rounding of tip side edge 0.3 ≤ PRC ≤ 1 0.1 mm increments ⊕ PRC ≤ (P-0.2)/2 ⊗ Cannot be combined with PCC.	<b>Quotation</b>
	<b>PCC</b>	Chamfering to tip side edge 0.3 ≤ PCC ≤ 1 0.1 mm increments ⊕ PCC ≤ (P-0.2)/2 ⊗ Cannot be combined with PRC.	
	<b>PKC</b>	Tip tolerance change $P^{+0.01} \Rightarrow +0.0005}$ (P dimension can be selected in 0.001 mm increments.) ⊗ Lapping cannot be used.	
Full length	<b>LC</b>	Full length change 20 ≤ LC < L 0.1mm increments (If combined with LKC-LKZ, 0.01mm increments can be selected.)	
Alterations to head	<b>LKC</b>	Full length tolerance change $L^{+0.3} \Rightarrow +0.05$	<b>Quotation</b>
	<b>LKZ</b>	Full length tolerance change $L^{+0.3} \Rightarrow +0.01$	
	<b>KC</b>	Addition of single key flat to head	
Alterations to head	<b>WKC</b>	Addition of double key flats in parallel	<b>Quotation</b>
	<b>KFC</b>	Double key flats at 0° and a selected angle 1° increments ⊗ Cannot be combined with KC-WKC.	

# STRAIGHT PUNCHES FOR HEAVY LOAD

—TiCN COATING—

Type	MH	Catalog No.	Shape
		Equivalent to SKH51 61~64HRC Surface 3000HV <b>H—AHC</b>	
		Powdered high-speed steel 64~67HRC Surface 3000HV <b>H—APHC</b>	

Catalog No. Type	No.	L												0.01mm increments		H	
														min.	max.		
—TiCN coating— <b>H—AHC</b> <b>H—APHC</b>	4	40	50	60	70	80							3.000	~	4.000	9	
	5	40	50	60	70	80							4.000	~	5.000	10	
	6	40	50	60	70	80							5.000	~	6.000	11	
	8	40	50	60	70	80	90	100					6.000	~	8.000	13	
	10	40	50	60	70	80	90	100					8.000	~	10.000	15	
	13	40	50	60	70	80	90	100	110	120				10.000	~	13.000	18
	16	40	50	60	70	80	90	100	110	120				13.000	~	16.000	21
	20	40	50	60	70	80	90	100	110	120				16.000	~	20.000	25
	25	40	50	60	70	80	90	100	110	120				20.000	~	25.000	30

Order Catalog No. — L — P Days to Ship **Quotation** **P** Price **Quotation**

**H—AHC 6** — 40 — P5.50

Alterations Catalog No. — L(LC) — P — (LKC...etc.)

**H—AHC 6** — LC45 — P5.50 — LKC

Alterations	Code	Spec.	1Code
Alterations to tip	<b>SC</b>	Lapping of tip ⊕ P dimension tolerance and increment are the same. The base material is finished before coating is applied. ⊕ Refer to the 229 page for a Effective lapping range.	<b>Quotation</b>
	<b>PRC</b>	Rounding of tip side edge 0.3 ≤ PRC ≤ 1 0.1 mm increments ⊕ PRC ≤ (P-0.2)/2 ⊗ Cannot be combined with PCC.	
	<b>PCC</b>	Chamfering to tip side edge 0.3 ≤ PCC ≤ 1 0.1 mm increments ⊕ PCC ≤ (P-0.2)/2 ⊗ Cannot be combined with PRC.	

Alterations	Code	Spec.	1Code
Alterations to head	<b>LC</b>	Full length change 20 ≤ LC < L 0.1mm increments (If combined with LKC-LKZ, 0.01mm increments can be selected.)	<b>Quotation</b>
	<b>LKC</b>	Full length tolerance change $L^{+0.3} \Rightarrow +0.05$	
	<b>KC</b>	Addition of single key flat to head	
Alterations to head	<b>WKC</b>	Addition of double key flats in parallel	<b>Quotation</b>
	<b>KFC</b>	Double key flats at 0° and a selected angle 1° increments ⊗ Cannot be combined with KC-WKC.	

PUNCHES