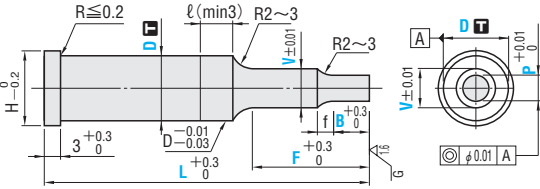
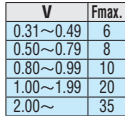
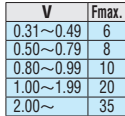
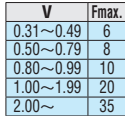


DOUBLE-STEPPED SHOULDER PUNCHES
—QUILL TYPE—

Type	Shank diameter D  tolerance		Catalog No.		Shape
			Type	Tip shape	
	D _{m5}	SKH51 61~64HRC	SHTW		
			PHTW		
	D ^{+0.005} ₀	SKH51 61~64HRC	A-SHTW		
			A-PHTW		

Catalog No.			L	0.01mm increments		0.1mm increments	0.01mm increments		0.1mm increments		H						
Type	Shape Tip shape	D					V	F									
				P	B												
(D _{m5}) SHTW PHTW		1.6	20 25 30 35 40 50 60	0.30~0.49	1.0~ 3.0	D>V>P+0.01		B+f+1<F≤Fmax. F<L-12	2.6								
				0.50~0.79	1.0~ 5.0												
				0.80~0.99	1.0~ 8.0												
				1.00~1.56	1.0~ 10.0												
(D ^{+0.005} ₀) A-SHTW A-PHTW		2.0		0.50~0.79	1.0~ 5.0					D>V>P+0.01		B+f+1<F≤Fmax. F<L-12	3.0				
				0.80~0.99	1.0~ 8.0												
				1.00~1.96	1.0~ 10.0												
				0.80~0.99	1.0~ 8.0												
		2.5		1.00~2.46	1.0~ 10.0									D>V>P+0.01		B+f+1<F≤Fmax. F<L-12	3.5

For dimension f, refer to the punch R length in [Products data] on P.1208 and verify that (V-P)/2=X.	
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 If V>D-0.03 →ℓ=0 If V>D-0.03, D^{-0.01}_{-0.03} (press-in lead) is not included.

 Order

Catalog No.

A-SHTWA2.0

L

40

P

P0.85

B

B2

V

V1.50

F

F10

 Dispatch

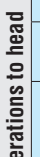
9

Days

 The volume discount rate is also applicable to alteration costs.  P.39



Alteration	Code	(A)	Rs./Code
 Alterations to tip	SC	Lapping of tip P dimension tolerance and increment are the same.	592
	PRC	Rounding of tip side edge 0.3≤PRC≤1 0.1 mm increments PCC≤(P-0.2)/2 ❗ Cannot be combined with PCC-GC.	296
	PCC	Chamfering to tip side edge 0.3≤PCC≤1 0.1 mm increments PCC≤(P-0.2)/2 ❗ Cannot be combined with PRC-GC.	148
	GC	20°≤GC<90° 1° increments Tip length B≥g+2 g=P/2×tan(90°-GC°) ❗ Cannot be used for P<1.0. ❗ When combined with SC, tip edges are rounded. ❗ Cannot be combined with LKC-LKZ-LCT-LMT-PRC-PCC.	296
	PKC	Tip tolerance change P+0.01 ₀ ⇄ +0.005 ₀ (P dimension can be selected in 0.001 mm increments.)	296
 Alterations to full length	LC	Full length change Can be changed within the following range. 0.1 mm increments D LC 1.6~2.5 20<LC<60 ❗ If LC is 25 or less, tip length B is 4 mm in all cases. (If combined with LKC-LKZ, 0.01 mm increments can be selected.)	148
	LCT	Changes to head thickness tolerance and full length are processed using a single code. The allowable range of change, increment, ordering process, and notes (❗) are the same as for LC.	222
	LMT	Changes to head thickness tolerance and full length are processed using a single code. The allowable range of change, increment, ordering process, and notes (❗) are the same as for LC.	
	LKC	Full length tolerance change L+0.3 ₀ ⇄ +0.05 ₀	
	LKZ	Full length tolerance change L+0.3 ₀ ⇄ 0.01 ₀	444

Alteration	Code	(A)	Rs./Code
 Alterations to head	KC	Addition of single key flat to head	148
	WKC	Addition of double key flats in parallel	296
	KFC	Double key flats at 0° and a selected angle 1° increments ❗ Cannot be combined with KC-WKC.	444
	HC	Head diameter change D≤HC<H 0.1 mm increments	148
	TC	Head thickness change 2≤TC<3 0.1 mm increments (If combined with TKC-TKM-LCT-LMT, 0.01 mm increments can be selected.) ❗ Full length L is shortened by (3-TC). If combined with LC-LCT-LMT, full length remains as specified.	148
Shank	TKC	Head thickness tolerance change T+0.3 ₀ ⇄ +0.02 ₀	148
	TKM	Head thickness tolerance change T+0.3 ₀ ⇄ -0.02 ₀	148
	TCC	Chamfering of head (C0.5) This improves the strength of the punch head.  P.1223 Ordering method TCC 0.5 ❗ Cannot be used for H<2.6.	148
	NDC	No press-in lead ℓ≥3 ⇄ ℓ=0	0



Volume discount price  P.37				
Quantity	1~9	10~29	30~99	100~200
Discount rate	Base unit price	5%	10%	15%

The price list indicates the prices of products with shank diameter tolerances of D_{m5}. For a shank diameter tolerance of D₀^{+0.005}, the price is increased by 100Rs.
(Example) For A-SHTWA1.6: 511 (Base unit price of SHTWA1.6) + 100=611Rs (Base unit price of the product)

D	(A)	
	SHTWA	PHTWA
1.6	511	770
2.0	511	770
2.5	511	770

