

DOUBLE-STEPPED SHOULDER PUNCHES FOR HEAVY LOAD

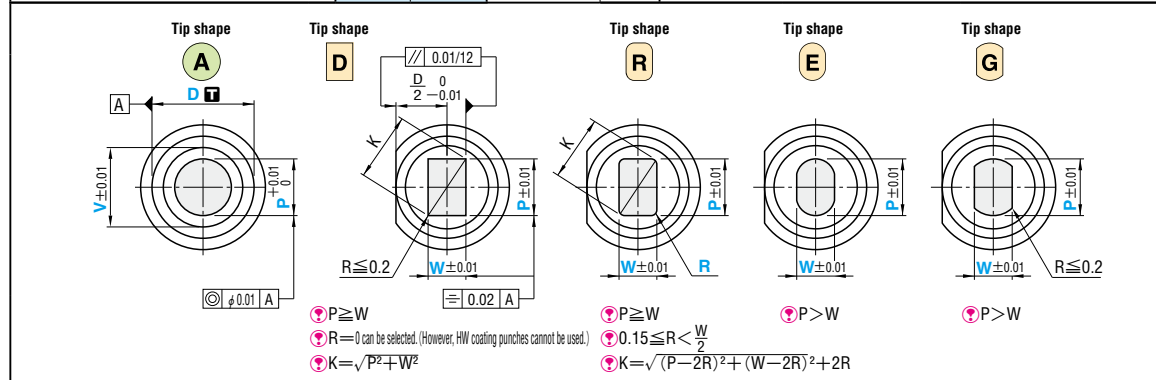
— FINISHED FOR RETAINERS, RW COATING —



Type	Shank diameter D tolerance	M H	Catalog No.		The tip shape can be selected from [Tip shape] A~G in the figure below.
			Type	Tip shape	
	Dm5	Equivalent to SKH51 64 ~ 67HRC Surface 3100HV	RW—APTW	A	
			RW—APHTW	D	
	D+0.005/0	Equivalent to SKH51 64 ~ 67HRC Surface 3100HV	ARW—APTW	E	
			ARW—APHTW	G	

For shank diameter tolerance D, select either m5 or +0.005/0.

The tip edges are very slightly rounded.



Type	Tip shape	D	L	0.01mm increments		Diagonal Kmax.	0.1mm increments		V	F	H	
				A			R					
				P	B		P-W	B				
(Dm5) RW—APTW RW—APHTW	A	5	50-60-70-80	1.50~1.99	2.0~20.0	4.96	1.00~1.49	2.0~8.0	B+f+2<F≤Fmax & A:F≤-35 DREG :F≤L-40	V	10	
				2.00~3.99	2.0~35.0		1.50~1.99	2.0~13.0				
				4.00~4.98	2.0~40.0		2.00~3.49	2.0~19.0				
				4.00~4.98	2.0~40.0		3.50~4.96	2.0~25.0				
				1.50~1.99	2.0~20.0		1.00~1.49	2.0~8.0				
				2.00~3.99	2.0~35.0		1.50~1.99	2.0~13.0				
	D	6	50-60-70-80	50-60-70-80	4.00~5.98	2.0~40.0	5.96	2.00~3.49	2.0~19.0	B+f+2<F≤Fmax & A:F≤-35 DREG :F≤L-40	V	11
					4.00~5.98	2.0~40.0		3.50~4.99	2.0~25.0			
					4.00~5.98	2.0~40.0		5.00~5.96	2.0~30.0			
					1.50~1.99	2.0~20.0		1.00~1.49	2.0~8.0			
					2.00~3.99	2.0~35.0		1.50~1.99	2.0~13.0			
					4.00~5.99	2.0~45.0		2.00~3.49	2.0~19.0			
(D+0.005/0) ARW—APTW ARW—APHTW	R	8	50-60-70-80-90-100	6.00~7.98	2.0~60.0	7.96	3.50~4.99	2.0~25.0	B+f+2<F≤Fmax & A:F≤-35 DREG :F≤L-40	V	13	
				6.00~7.98	2.0~60.0		5.00~7.96	2.0~30.0				
				1.50~1.99	2.0~20.0		1.25~1.49	2.0~8.0				
				2.00~3.99	2.0~35.0		1.50~1.99	2.0~13.0				
				4.00~5.99	2.0~45.0		2.00~3.49	2.0~19.0				
				6.00~7.98	2.0~60.0		3.50~4.99	2.0~25.0				
	E	10	50-60-70-80-90-100	50-60-70-80-90-100	6.00~9.98	2.0~60.0	9.96	5.00~7.96	2.0~30.0	B+f+2<F≤Fmax & A:F≤-35 DREG :F≤L-40	V	15
					6.00~9.98	2.0~60.0		5.00~9.96	2.0~30.0			
					1.50~1.99	2.0~20.0		1.25~1.49	2.0~8.0			
					2.00~3.99	2.0~35.0		1.50~1.99	2.0~13.0			
					4.00~5.99	2.0~45.0		2.00~3.49	2.0~19.0			
					6.00~9.98	2.0~60.0		3.50~4.99	2.0~25.0			
G	13	50-60-70-80-90-100	50-60-70-80-90-100	6.00~12.98	2.0~60.0	12.96	5.00~12.96	2.0~30.0	B+f+2<F≤Fmax & A:F≤-35 DREG :F≤L-40	V	18	
				6.00~12.98	2.0~60.0		5.00~12.96	2.0~30.0				
				3.00~3.99	2.0~35.0		1.50~1.99	2.0~13.0				
				4.00~5.99	2.0~45.0		2.00~3.49	2.0~19.0				
				6.00~12.98	2.0~60.0		3.50~4.99	2.0~25.0				
				6.00~12.98	2.0~60.0		5.00~12.96	2.0~30.0				
	16	50-60-70-80-90-100	50-60-70-80-90-100	5.00~5.99	2.0~45.0	15.96	2.00~3.49	2.0~19.0	B+f+2<F≤Fmax & A:F≤-35 DREG :F≤L-40	V	21	
				6.00~15.98	2.0~60.0		3.50~4.99	2.0~25.0				
				6.00~15.98	2.0~60.0		5.00~15.96	2.0~30.0				
				6.50~19.98	2.0~60.0		2.50~3.49	2.0~19.0				
				6.50~19.98	2.0~60.0		3.50~4.99	2.0~25.0				
				6.50~19.98	2.0~60.0		5.00~19.96	2.0~30.0				
	20	50-60-70-80-90-100	50-60-70-80-90-100	9.00~24.98	2.0~60.0	24.96	3.00~3.49	2.0~19.0	B+f+2<F≤Fmax & A:F≤-35 DREG :F≤L-40	V	25	
				9.00~24.98	2.0~60.0		3.50~4.99	2.0~25.0				
				9.00~24.98	2.0~60.0		5.00~24.96	2.0~30.0				
				9.00~24.98	2.0~60.0		3.00~3.49	2.0~19.0				
				9.00~24.98	2.0~60.0		3.50~4.99	2.0~25.0				
				9.00~24.98	2.0~60.0		5.00~24.96	2.0~30.0				

If V>D-0.03...ℓ=0 If V>D-0.03, D-0.01 (press-in lead) is not included.

Order Catalog No. L P W B V F R(Only)

RW-APHTW 13 - 80 - P10.50 - W7.34 - B25 - V12.00 - F35 - R0.5

Days to Ship Quotation

Alterations Catalog No. L(LC) P W B V F R(Only) (KC-WKC...etc.)

RW-APTWA 10 - LC72 - P4.80 - B10 - V6.80 - F25 - SKC

Alterations	Code	A	DREG	1Code
Alterations to tip	PRC	Rounding of tip side edge 0.3≤PRC≤1 0.1mm increments ⊕ PRC≤(P-0.2)/2		
Alterations to full length	LC	Full length change 40+F≤LC<L 0.1mm increment (If combined with LKC, 0.01mm increments can be selected.)		
Alterations to shank	LKC	Full length tolerance change L+0.3/0 → +0.05/0		

Alterations	Code	A	DREG	1Code
Alterations to head	KC	Addition of single key flat to head	Key flat position change 1° increments	
	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	Double key flats at 0° and a selected angle 1° increments	
Alterations to shank	NKC	No key flat	No key flat	
	SKC	Single key flat on shank D5-6 V≤D-1.2 (Machining width 0.5) D8~ V≤D-2.2 (Machining width 1) ⊗ Cannot be combined with KC-WKC-KFC.		
	NDC	No press-in lead	ℓ≥3 ⇔ ℓ=0	

Price Quotation

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