

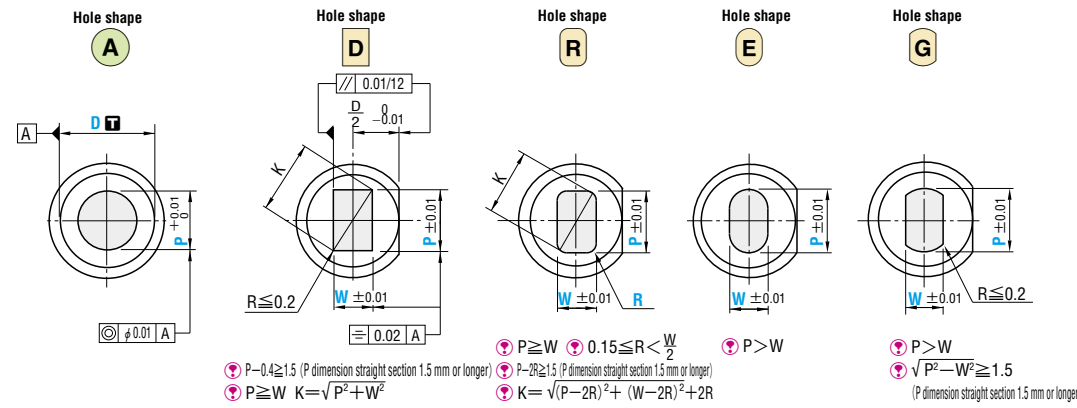
# SCRAP RETENTION BUTTON DIES

—HEADED TYPE (ECONOMY)—



Headed	Shank diameter D tolerance	M H	D dimension	Catalog No.	The hole shape can be selected from A D R E G below.
	D <sub>m5</sub>	Equivalent to SKD11 60~63HRC	D6~56	SR—EMHD SR—EHD	Economy type 
			D6~25	SR—EPMHD SR—EPHD	
	D <sup>+</sup> +0.005/0	Equivalent to SKD11 60~63HRC	D6~16	SRA—EMHD SRA—EHD	
			D6~16	SRA—EPMHD SRA—EPHD	

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



D tolerance	Catalog No.	Type	D	L	0.01mm increments				MT (workpiece material thickness)	C (clearance)	b	d	H	T
					A	D R E G	R	R						
+0.009/+0.004	(Equivalent to SKD11) (D <sub>m5</sub> ) (D <sup>+</sup> +0.005/0)	A SR—EMHD SRA—EMHD	6	16 20 22 25 28 30 32 35	1.00~ 3.00	3.00	1.00				3	3.4	9	
			8	16 20 22 25 28 30 32 35 40	1.00~ 4.00	4.00	1.00				4	4.4	11	
			10	16 20 22 25 28 30 32 35 40 (45)	2.00~ 6.00	6.00	1.20				6	6.4	13	
			13	16 20 22 25 28 30 32 35 40 (45)	3.00~ 8.00	8.00	1.50				8	8.4	16	
			16	16 20 22 25 28 30 32 35 40 (45)	5.00~ 10.00	10.00	2.00				10	10.6	19	
			20	16 20 22 25 28 30 32 35 40 (45)	7.00~ 12.00	12.00	3.00				12	12.6	23	
			22	16 20 22 25 28 30 32 35 40 (45)	8.00~ 14.00	14.00	3.00				14	14.6	25	5
			25	16 20 22 25 28 30 32 35 40 (45)	10.00~ 16.00	16.00	3.00				16	16.6	28	
			32	16 20 22 25 28 30 32 35	15.00~ 20.00	20.00	4.00				20	20.6	35	
			38	16 20 22 25 30 35	19.00~ 26.00	26.00	5.00				26	26.6	41	
+0.012/+0.006	(Powdered high-speed steel) (D <sub>m5</sub> ) (D <sup>+</sup> +0.005/0)	D SR—EPMHD SRA—EPMHD	6	16 20 22 25 30 35	1.00~ 3.00	3.00	1.00				3	3.4	9	
			8	16 20 22 25 30 35	1.00~ 4.00	4.00	1.00				4	4.4	11	
			10	16 20 22 25 30 35	2.00~ 6.00	6.00	1.20				6	6.4	13	
			13	16 20 22 25 30 35	3.00~ 8.00	8.00	1.50				8	8.4	16	
			16	16 20 22 25 30 35	5.00~ 10.00	10.00	2.00				10	10.6	19	
			20	16 20 22 25 30 35	7.00~ 12.00	12.00	3.00				12	12.6	23	
			22	16 20 22 25 30 35	8.00~ 14.00	14.00	3.00				14	14.6	25	5
			25	16 20 22 25 30 35	10.00~ 16.00	16.00	3.00				16	16.6	28	
			32	16 20 22 25 28 30 32 35	15.00~ 20.00	20.00	4.00				20	20.6	35	
			38	16 20 22 25 30 35	19.00~ 26.00	26.00	5.00				26	26.6	41	

\* Can be used only for workpiece materials with tensile strengths up to 1177 N/mm<sup>2</sup> (120 kgf/mm<sup>2</sup>).  
 \* MT (workpiece material thickness) and C (clearance) are used as data for machining the scrap retention grooves. Specify the shaped hole dimensions (P-W-R) when selecting the button die finishing dimensions.  
 \* D = (20), (22), (25), (32), (38), (45), (50), (56) are specifications available for shank diameter tolerance of D<sub>m5</sub> only.  
 \* L = (45) is a specification available for shank dia. tolerance of D<sub>m5</sub> only.

Order **Catalog No.** SR—EMHD 13 — **L** 30 — **P** P7.00 — **W** — **R** (R only) — **MT** MT1.50 — **C** C0.105

Days to Ship **Quotation**

Alterations **Catalog No.** SR—EMHD 13 — **L** (LC) 30 — **P** (PC) P7.00 — **W** (WC) — **R** — **MT** MT1.50 — **C** C0.105 — (HC-TC-CKC-MKC, etc.) TC3

Alteration	Code	A	D R E G	1Code
Alterations to shaped hole	PC	Shaped hole diameter change min.: $\frac{P}{WC} > \frac{P}{WC} \geq \frac{P}{W} \geq 1.00$ 0.01 mm increments * For A only, if PC is 1.00~1.99, then b=4. max.: $\frac{P}{WC} \leq P \cdot K_{max} + 0.2$ 0.01 mm increments		
	WC			
Alterations to full length	LC	Full length change (reduction in shaped hole depth) $10 \leq L - (b-1) \leq LC < L$ 0.1 mm increments (If combined with LKC-LKZ-CKC-MKC, 0.01 mm increments can be selected.) * Dimension b and lead are shortened by (L-LC).		
	LKC	Full length tolerance change $L +0.4 \rightarrow +0.05$ $+0.2 \rightarrow 0$		
	LKZ	Full length tolerance change $L +0.4 \rightarrow +0.01$ $+0.2 \rightarrow 0$ * Cannot be used for L (LC) < 16. * Cannot be used for D > 25.		
	CKC	Changes to head thickness tolerance and full length tolerance are processed using a single code. Machining limits are the same as for TKC and LKC. * Cannot be used for L (LC) < 16. TKC Head thickness tolerance change $T +0.3 \rightarrow +0.02$ $0 \rightarrow 0$ LKC Full length tolerance change $L +0.4 \rightarrow +0.05$ $+0.2 \rightarrow 0$		
MKC	Changes to head thickness tolerance and full length tolerance are processed using a single code. Machining limits are the same as for TKM and LKC. * Cannot be used for L (LC) < 16. TKM Head thickness tolerance change $T +0.3 \rightarrow 0$ $0 \rightarrow -0.02$ LKC Full length tolerance change $L +0.4 \rightarrow +0.05$ $+0.2 \rightarrow 0$			

Price **Quotation**

Alteration	Code	A	D R E G	1Code
Alterations to head	KC	Addition of single key flat to head 	270° Key flat position change 1° increments 180°	
	WKC	Addition of double key flats in parallel * Can be combined with KC for shapes D R E G.	270° Double key flats at 0° and a selected angle 1° increments 180°	
	KFC	Double key flats at 0° and a selected angle 1° increments * Cannot be combined with KC-WKC. * Cannot be used for L (LC) < 16 or D > 25.	270° Double key flats at 0° and a selected angle 1° increments 180°	
	HC	Head diameter change $D \leq HC < H$ 0.1 mm increments		
	TC	Head thickness change $2 \leq TC < T$ 0.1 mm increments (If combined with TKC-TKM-CKC-MKC, 0.01 mm increments can be selected.) * Full length L is shortened by (T-TC). If combined with LC, full length is equal to LC.		
	TKC	Head thickness tolerance change $T +0.3 \rightarrow +0.02$ $0 \rightarrow 0$ * Cannot be used for L < 16.		
Others	SKC	Single key flat on shank * Can be used with D ≥ 8 and L (LC) ≥ 20. * Cannot be combined with KC-WKC-KFC.		

BUTTON DIES