

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.
	Dm5	Equivalent to SKD11 60~63HRC	D6~56	EMHD EHD	
			Powdered high-speed steel 64~67 HRC	D6~25	
D+0.005 0	Equivalent to SKD11 60~63HRC	D6~16	A-EMHD A-EHD		
		Powdered high-speed steel 64~67 HRC	D6~16	A-EPMHD A-EPHD	

Hole shape	Hole shape	Hole shape	Hole shape	Hole shape
A	D	R	E	G
<ul style="list-style-type: none"> ⊙ $\phi 0.01$ A 	<ul style="list-style-type: none"> ⊙ $P \geq W$ ⊙ $K = \sqrt{P^2 + W^2}$ 	<ul style="list-style-type: none"> ⊙ $P \geq W$ ⊙ $0.15 \leq R < \frac{W}{2}$ ⊙ $K = \sqrt{(P-2R)^2 + (W-2R)^2} + 2R$ 	<ul style="list-style-type: none"> ⊙ $P > W$ 	<ul style="list-style-type: none"> ⊙ $P > W$

D tolerance	Catalog No.	L	0.01mm increments				b	d	H	T			
			A	D R E G	R	R							
D	m5	Type	min.	P max.	P-Kmax.	P-Wmin.							
6	+0.009 +0.004	(Equivalent to SKD11) (Dm5) (D+0.005)	6	16 20 22 25 28 30 32 35	1.00~ 3.00	3.00	1.00	3	3.4	9	5		
8	+0.012 +0.006		8	16 20 22 25 28 30 32 35 40	1.00~ 4.00	4.00	1.00	4	4.4	11			
10	+0.015 +0.007		10	16 20 22 25 28 30 32 35 40 (45)	2.00~ 6.00	6.00	1.20	6	6.4	13			
13	+0.020 +0.009		13	16 20 22 25 28 30 32 35 40 (45)	3.00~ 8.00	8.00	1.50	8	8.4	16			
16	+0.024 +0.011		16	16 20 22 25 28 30 32 35 40 (45)	5.00~ 10.00	10.00	2.00	10	10.6	19			
20	+0.017 +0.008		20	16 20 22 25 28 30 32 35 40 (45)	7.00~ 12.00	12.00	3.00	12	12.6	23			
22	+0.020 +0.009		22	16 20 22 25 28 30 32 35 40 (45)	8.00~ 14.00	14.00	3.00	14	14.6	25			
25	+0.024 +0.011		25	16 20 22 25 28 30 32 35 40 (45)	10.00~ 16.00	16.00	3.00	16	16.6	28			
32	+0.030 +0.014		32	16 20 22 25 28 30 32 35	15.00~ 20.00	20.00	4.00	20	20.6	35			
38	+0.036 +0.016		38	16 20 22 25 30 35	19.00~ 26.00	26.00	5.00	26	26.6	41			
45	+0.044 +0.024		45	20 22 25 30 35	25.00~ 35.00	35.00	6.00	30	36.0	48			
50	+0.052 +0.032		50	20 22 25 30 35	33.00~ 40.00	40.00	7.00	40	41.0	53			
56	+0.060 +0.040		56	20 22 25 30 35	38.00~ 45.00	45.00	8.00	45	46.0	59			
6	+0.009 +0.004		(Powdered high-speed steel) (Dm5) (D+0.005)	6	16 20 22 25 30 35	1.00~ 3.00	3.00	1.00	3	3.4		9	5
8	+0.012 +0.006			8	16 20 22 25 30 35	1.00~ 4.00	4.00	1.00	4	4.4		11	
10	+0.015 +0.007			10	16 20 22 25 30 35	2.00~ 6.00	6.00	1.20	6	6.4		13	
13	+0.020 +0.009	13		16 20 22 25 30 35	3.00~ 8.00	8.00	1.50	8	8.4	16			
16	+0.024 +0.011	16		16 20 22 25 30 35	5.00~ 10.00	10.00	2.00	10	10.6	19			
20	+0.030 +0.014	20		16 20 22 25 30 35	7.00~ 12.00	12.00	3.00	12	12.6	23			
25	+0.036 +0.016	25		16 20 22 25 30 35	10.00~ 16.00	16.00	3.00	16	16.6	28			

⊙ D = (20), (22), (25), (32), (38), (45), (50), (56) are specifications available for shank diameter tolerance of Dm5 only.
 ⊙ L = (45) is a specification available for shank dia. tolerance of Dm5 only.

Order **Catalog No.** — L — P — W — R (R only)
 EMHD 13 — 30 — P7.00

Days to Ship **Quotation**

Alterations **Catalog No.** — L (LC) — P (PC) — W (WC) — R — (HC-TC-CKC-MKC, etc.)
 EMHD 13 — 30 — P7.00 — TC4.0 — KFC90

Alteration	Code	A	D R E G	1Code
Alterations to shaped hole	PC	Shaped hole diameter change min.: $P > PC \geq \frac{Pmin.}{2} \geq 0.50$ 0.01 mm increments ⊙ When PC is 1.00~1.99, then b=4.	Shaped hole diameter change min.: $P > PC \geq \frac{P-Wmin.}{2} \geq 1.00$ 0.01 mm increments	
	WC	max.: $W < WC \leq P \cdot Kmax. + 0.2$ 0.01 mm increments		
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.		
Others	TKC	Head thickness tolerance change $T + 0.3 \rightarrow +0.02$ $0 \rightarrow 0$	LKC Full length tolerance change $L + 0.4 \rightarrow +0.05$ $+0.2 \rightarrow 0$	
	TKM	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 Full length tolerance change $T + 0.3 \rightarrow 0$ $0 \rightarrow -0.02$	

Alteration	Code	A	D R E G	1Code
Alterations to head	KC	Addition of single key flat to head	270° Key flat position 180° 0° changes* 90° 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* 180° 0° 90° increments	Double key flats at 0° and a selected angle* 180° 0° 90° increments	
	HC	Head diameter change $D \leq HC < H$ 0.1 mm increments		
	TC	Head thickness change $2 \leq TC < 5$ 0.1 mm increments (If combined with TKC-TKM-CKC-MKC, 0.01 mm increments can be selected.) ⊙ Full length L is shortened by (5-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 (LC) < 16.		
Others	TKM	Head thickness tolerance change $T + 0.3 \rightarrow 0$ $0 \rightarrow -0.02$ ⊙ Cannot be used for L (LC) < 16.		
	RC	Head thickness is machined to a tolerance of -0.04~0 relative to the retainer surface. ⊙ Cannot be used for L (LC) < 30.		
SKC	Single key flat on shank ⊙ Can be used with $D \geq 8$ and $L (LC) \geq 20$. ⊙ Cannot be combined with KC-WKC-KFC.			

Price **Quotation**