

TILTING BUTTON DIES

—DOWEL SLOT TYPE—

Headed type and straight type tilting button dies have been renamed. The new name is "Button dies, deep hole type". (P.371)

RoHS
KSDS
KD□S

M Equivalent to SKD11
H 60~63HRC
A MS4—15

Hole shape **A**

⊙ φ 0.01 | A

Hole shape **D**

⊙ φ 0.01 | A

Hole shape **R**

⊙ φ 0.01 | A

Hole shape **E**

⊙ φ 0.01 | A

Hole shape **G**

⊙ φ 0.01 | A

⊙ P ≥ W
⊙ K = √(P² + W²)

D tolerance	Catalog No.		L	0.01mm increments				B	b	d	F	Base unit price 1~9 pieces		
	Type	D		A	D R E G	R	KSDS					KD□S		
	min. P max.			P-Kmax.	P-Wmin.	R								
D _{n5}	10	A KSDS	10	16	20	22	25	30	35	40	2.00~6.00	6.00	1.20	Quotation
	13		13	16	20	22	25	30	35	40	3.00~8.00	8.00	1.50	
	16	D KDDS	16	16	20	22	25	30	35	40	5.00~10.00	10.00	2.00	
	20		20	16	20	22	25	30	35	40	7.00~12.00	12.00	3.00	
	25	R KDRS	25	16	20	22	25	30	35	40	10.00~16.00	16.00	3.00	
	32		32	16	20	22	25	30	35	40	15.00~20.00	20.00	4.00	
	38	E KDES	38	16	20	22	25	30	35	40	19.00~26.00	26.00	5.00	
	45		45	20	22	25	30	35	40	25.00~35.00	35.00	6.00		
	50	G KDGS	50	20	22	25	30	35	40	33.00~40.00	40.00	7.00		
	56		56	20	22	25	30	35	40	38.00~45.00	45.00	8.00		

Order Catalog No. - L - P - W - R (R only)
 KDDS 25 - 35 - P10.00 - W8.00

Days to Ship Quotation

Price Quotation

Alterations Catalog No. - L(LC) - P(PC) - W(WC) - R - (BC-KC, etc.)
 KDRS45 - 40 - P25.2 - W10.2 - R1.50 - BC20

Alteration	Code	A	D R E G	1Code
Alterations to shaped hole	PC	Shaped hole diameter change min: $\frac{P}{W} > \frac{PC}{WC} \geq \frac{P-Wmin}{2} \geq 1.00$ 0.01mm increments ⊙ only, if PC is 1.00~1.99, then B·b=4.	D R E G	Quotation
	WC			
	BC	Shaped hole depth change $1 \leq BC \leq b$ 0.1mm increments		

Alteration	Code	A	D R E G	1Code
Alterations to full length	PK	Shaped hole diameter tolerance change $P+0.01 \rightarrow +0.005$	D R E G	Quotation
	LC	Full length change $10 \leq LC < L$ 0.1mm increments (if combined with LKC, 0.01mm increments can be selected.) ⊙ Press-in lead is shortened by (L-LC).		
	LKC	Full length tolerance change $L+0.4 \rightarrow +0.05$		
Others	KC	Key flat position 180° change 1° increments		

BUTTON DIES FOR FLAME HARDENING

—DOWEL SLOT TYPE—

RoHS
HKSDS
HKD□S

M SX105V
H Not hardened
A MS4—15

Hole shape **A**

⊙ φ 0.01 | A

Hole shape **D**

⊙ φ 0.01 | A

Hole shape **R**

⊙ φ 0.01 | A

Hole shape **E**

⊙ φ 0.01 | A

Hole shape **G**

⊙ φ 0.01 | A

⊙ P ≥ W
⊙ 0.15 ≤ R < $\frac{W}{2}$
⊙ K = √(P² + W²)

D _{n5}	Catalog No.		L	0.01mm increments				b	d	F	Base unit price 1~9 pieces	
	Type	D		A	D R E G	R	HKSDS				HKD□S	
	min. P max.			P-Kmax.	P-Wmin.	R						
20	A HKSDS	20	25	6.00~12.00	12.20	3.00	8	10	6.4	6	8.4	7.5
25	D HKDDS	25	25	10.00~16.00	16.20	3.00	8	12.6	10	12.6	10	12.5
32	R HKDRS	32	25	15.00~20.00	20.20	4.00	10	20.6	16	20.6	16	19
38	E HKDES	38	25	19.00~26.00	26.20	5.00	10	36.0	22.5	36.0	22.5	25

Order Catalog No. - L - P - W - R (R only) Days to Ship Quotation
 HKDRS 20 - 25 - P10.00 - W8.00 - R2.25

Price Quotation

Alterations Catalog No. - L(LC) - P(PC) - W(WC) - R - (KC-LKC-TYC, etc.)
 HKDDS 20 - 25 - P8.00 - WC2.00 - KC90

Alteration	Code	A	D R E G	1Code
Alterations to shaped hole	PC	Shaped hole diameter change $P > \frac{PC}{WC} \geq \frac{P-Wmin}{2} \geq 1.50$ 0.01mm increments	D R E G	Quotation
	WC			
	TYC			

Alteration	Code	A	D R E G	1Code
Alterations to full length	LC	Full length change $10 \leq LC < L$ 0.1mm increments (if combined with LKC, 0.01mm increments can be selected.) ⊙ Press-in lead is shortened by (L-LC).	D R E G	Quotation
	LKC			
Head	KC	Key flat position 180° change 1° increments		

Button dies for flame hardening
 Because these button dies have not been hardened, alterations can be added easily. They are suitable for cases such as when the shape is machined after the die is installed onto a cast base. If flame hardening is performed after machining, the hardened surface layer will be 63~64HRC, providing high wear resistance.
 ⊙ The shaped hole dimensions are the dimensions prior to flame hardening. Be aware that depending on the hardening conditions, some changes in the dimensions may occur.

