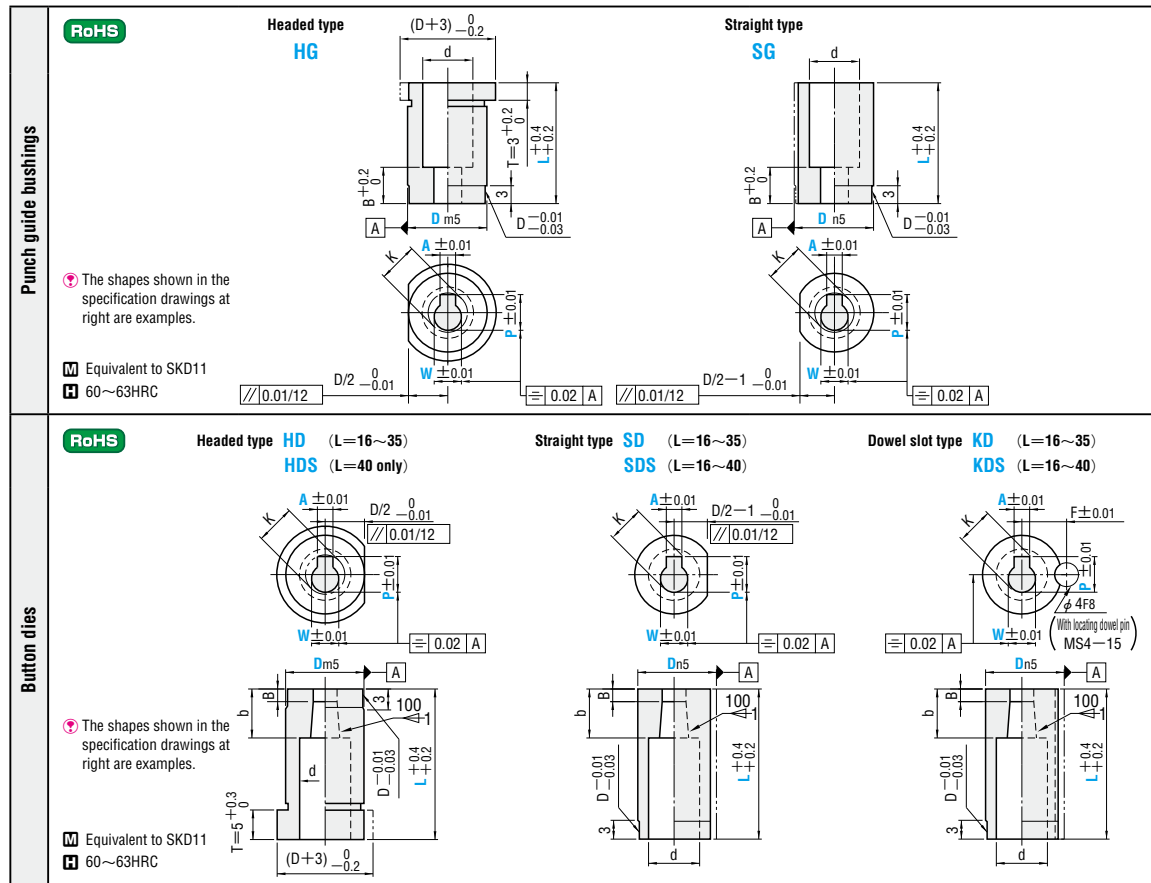


SPECIAL SHAPED PUNCH GUIDE BUSHINGS & BUTTON DIES



Type	Shape	D	L	P-K max.	P-W min.	Punch guide		Button dies		Tilting button dies		d	F								
						HG-SG	B	HD-SD-KD	B	HDS-SDS-KDS	b			B							
Punch guide	HG	2H~12H	8	10	4.00	2.00	4	-	-	-	-	4.4	-								
		2J~18J	10	13	6.00	2.00						6.4									
	3K~29K	13	20	8.00	3.00	8.4															
	2L~7L	16	22	10.00	3.00	10.6															
Button dies	HD	6	6	3.00	2.00	-	-	3	2	-	-	3.4	-								
		8	8	4.00	2.00							4.4									
	HD-SD	2H~12H	10	(16)	6.00							2.00		6	10	6	6.4	6			
		2J~18J	13	20	8.00							2.00		10	6	8.4	7.5				
		3K~29K	16	22	10.00							2.50		12	8	10.6	8				
		2L~7L	20	22	12.00							3.00		15	10	12.6	10				
		8L (KD-KDS only)	25	25	16.00							4.00		20	14	16.6	12.5				
		Hole shape	Select from the shapes shown on P.715.	32	30							20.00		5.00	8	-	-	-	-	20.6	16
				38	35							26.00		6.00						26.6	19
				45	(40)							35.00		6.00						36.0	22.5
				50								40.00		7.00						41.0	25
				56								45.00		8.00						46.0	28

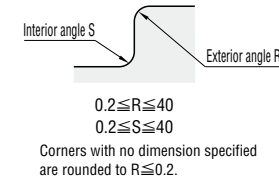
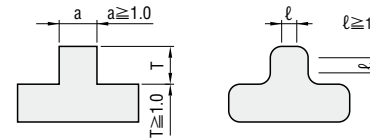
If L = (16) · (40), the applicable types and D dimensions are as shown at right.

L	D	Type
(16)	6	HD
	8	SD
	10	SDS
	13	KD
(40)	10	HDS
	13	SDS
	16	KDS
	20	KDS

If Y dimension is smaller than min.Y, button die blanks with pilot holes (prepared holes for machining) cannot be used, and therefore express are not available.

D	min.Y
6~16	0.7
20	0.8
25	1.2
32~56	1.7

Machining limit



Increment

Dimension tolerance	Increment
$W_{\pm 0.01}$	0.01mm increments
$P_{\pm 0.01}$	0.01mm increments
$A_{\pm 0.01}$	0.01mm increments
$B_{\pm 0.01}$	0.01mm increments
$C_{\pm 0.01}$	0.01mm increments
Q	0.01mm increments
R	0.01mm increments
S	0.01mm increments
C(R)	0.01mm increments
A° (Angle)	0.1° increments

Order **Catalog No.** - L - P·W·A·B·C·Q·R·S...0.01mm increments
 HD8J 25 - 25 - P14.00-W11.00-R4.00

Days to Ship **Quotation**

Alterations **Catalog No.** - L(LC) - P(PC)·W(WC)·A·B·C·Q·R·S - (BC·HC·TC, etc.)
 HD8J 25 - 25 - P14.00-W11.00-R4.00 - BC4-KFC225

Alteration	Code	Spec.	1Code
Alterations to shaped hole	PC WC	Shaped hole diameter change $\min. \frac{P}{W} > \frac{PC}{WC} \geq \frac{P \cdot W \cdot \min.}{2} \geq 1.00$ 0.01mm increments $\max. \frac{P}{W} < \frac{PC}{WC} \leq P \cdot K \max. + 0.2$ 0.01mm increments	Quotation
	BC	Shaped hole depth change $1 \leq BC \leq b$ 0.1mm increments Cannot be used for HG·SG.	
Alterations to full length	LC	Full length change (reduction in shaped hole depth) 0.1mm increments Punch guide bushing $10 \leq L - (B-1) \leq LC < L$ B dimension and press-in lead are shortened by (L-LC). Button die $10 \leq L - (b-1) \leq LC < L$ Dimension b and press-in lead are shortened by (L-LC).	Quotation
	LKC LKZ	Full length tolerance change $L_{+0.4}^{-0.2} \Rightarrow +0.05$ $L_{+0.2}^{-0.2} \Rightarrow 0$ Full length tolerance change $L_{+0.4}^{-0.2} \Rightarrow +0.01$ $L_{+0.2}^{-0.2} \Rightarrow 0$ Cannot be used for L < 16. Cannot be used for D > 25.	

Price **Quotation**

Alteration	Code	Spec.	1Code
Alterations to head	HC	Head diameter change $D \leq HC < D+3$ 0.1mm increments	Quotation
	TC	Head thickness change $2 \leq TC < T$ 0.1mm increments Full length is shortened by (T-TC). If combined with LC, full length is equal to LC.	
	KC	Guide Die Key flat position change 0° 90° 180° 270° 1° increments	
	WKC	Double key flats in parallel Can be combined with KC.	
	KFC	Guide Die Double key flats at 0° and a selected angle 1° increments Cannot be combined with KC-WKC. Cannot be used for D > 25.	
	RC	Head thickness is machined to a tolerance of -0.04~0 relative to the retainer surface. Cannot be used for L < 30.	
Alterations to head	TKC	Head thickness tolerance change $T_{+0.2}^{-0.2} \Rightarrow +0.02$ Cannot be used for L < 16.	Quotation
	TKM	Head thickness tolerance change $T_{+0.2}^{-0.2} \Rightarrow -0.02$ Cannot be used for L < 16.	

SPECIAL SHAPED PUNCHES & DIES