


# CARBIDE BUTTON DIE BLANKS

— HEADED · STRAIGHT —

—Headed—



For shank diameter tolerance  $D_{m5}$ , select either m5 or  $+0.005_0$ .

RoHS

**M**  
**H**

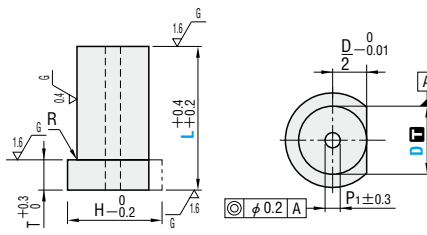
V40 (HIP)  
87~88HRA

Shank diameter  
 $D_{m5}$  tolerance

Catalog No.

**WAHD—B**


**A—WAHD—B**



D	3·4·5	6~25
R	6~25	$R \leq 0.5$

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—Straight—



For shank diameter tolerance  $D_{n5}$ , select either m5 or  $+0.005_0$ .

RoHS

**M**  
**H**

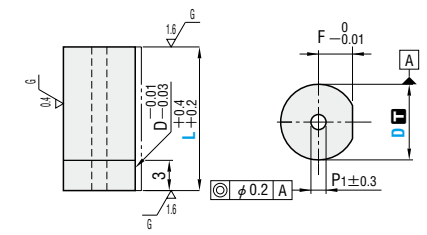
V40 (HIP)  
87~88HRA

Shank diameter  
 $D_{n5}$  tolerance

Catalog No.

**WASD—B**

**A—WASD—B**



Catalog No. Type	D	L	P <sub>1</sub>	F	H	T	Base unit price 1~4 pieces	
							WAHD—B A—WAHD—B	WASD—B A—WASD—B
Headed ( $D_{m5}$ ) <b>WAHD—B</b> <b>A—WAHD—B</b>	3	13	0.7	1.0	4	3	Quotation	
	4							
	5							
	6							
	8							
Straight ( $D_{n5}$ ) <b>WASD—B</b> <b>A—WASD—B</b>	10	25	1.7	2.0	9	5	Quotation	
	13							
	16 (30)							
	20							
	25 (35)							
	11.5		2.2	11.5	28			

Ⓜ L(30)·(35) → D8~25 Full length L(30)·(35) are specifications available for D8~25 only.

Order **Catalog No.** — **L**  
A—WAHD—B 13 — 25

Days to Ship **Quotation**

Alterations **Catalog No.** — **L(LC·SLC)** — (HC·TC·TKC·TKM, etc.)  
WAHD—B 13 — LC23 — TC3.0—TKC

Price **Quotation**


Alteration	Code	Spec.	1Code
Alterations to full length	LC	Full length change $10 \leq LC < L$ 0.1mm increments (If combined with LKC-LKZ, 0.01mm increments can be selected.)	Quotation
		Full length change $8 \leq LC < L$ 0.1mm increments (If combined with LKC-LKZ, 0.01mm increments can be selected.)	
Alterations to head	LKC	Full length tolerance change ⊗ Cannot be used for L(LC) < 16. $L + 0.4 \Rightarrow +0.05$ $+0.2 \Rightarrow 0$	Quotation
	LKZ	Full length tolerance change ⊗ Cannot be used for L(LC) < 16. $L + 0.4 \Rightarrow +0.01$ $+0.2 \Rightarrow 0$	

Alteration	Code	Spec.	1Code
Alterations to head	WKC	Addition of double key flats in parallel ⊗ Cannot be used for WASD—B·A—WASD—B D3~5. ⊗ Cannot be used for straight types.	Quotation
	KFC	Double key flats at 0° and a selected angle 1° increments ⊗ Cannot be combined with WKC. ⊗ Cannot be used for L(LC) < 16. ⊗ Cannot be used for straight types.	
	NKC	No key flat	
	HC	Head diameter change $D \leq HC < H$ 0.1mm increments	
	TC	Head thickness change $2 \leq TC < T$ 0.1mm increments (If combined with TKC·TKM, 0.01mm 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(LC) < 16.	
	TKM	Head thickness tolerance change $T + 0.3 \Rightarrow -0.02$ $0 \Rightarrow 0$ ⊗ Cannot be used for L(LC) < 16.	

# SPACERS

— FOR ANGULAR BUTTON DIES AND STRAIGHT BUTTON DIES WITH RELIEF HOLES —

—For angular button dies—



For shank diameter tolerance  $D_{m5}$ , select either m5 or  $+0.005_0$ .

RoHS

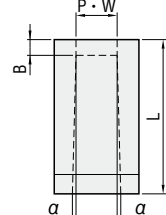
**M**  
**H**

SK5  
45HRC~

**■ Button die L dimension and P·W spread**

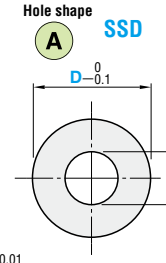
(α×2) part dimension: Spread of P·W (when B=2) Values in the table below are values for the α part on each side.

Taper	1/50	1/100	1/150
16	0.28	0.14	0.09
20	0.36	0.18	0.12
22	0.40	0.20	0.13
25	0.46	0.23	0.15
30	0.56	0.28	0.19
35	0.66	0.33	0.22

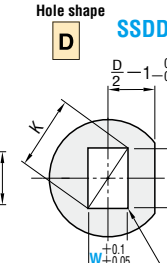


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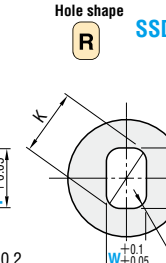
Hole shape **A** SSD



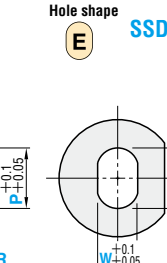
Hole shape **D** SSDD



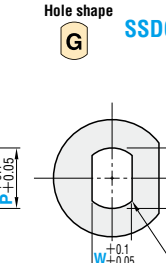
Hole shape **R** SSSDR



Hole shape **E** SSDE



Hole shape **G** SSDDG



Ⓜ  $P \geq W$   
Ⓜ  $K = \sqrt{P^2 + W^2}$   
Ⓜ  $P \geq W$   
Ⓜ  $0.15 \leq R < \frac{W}{2}$   
Ⓜ  $K = \sqrt{(P-2R)^2 + (W-2R)^2} + 2R$


Catalog No. Type	D	0.01mm increments					t	Base unit price (8-piece set) 1~4 sets
		A min. P max.	D R E G P·Kmax. P·Wmin.	R				
<b>A</b> SSD	6	1.00~4.00	—	—	—	—	0.05	
<b>D</b> SSDD	8	1.00~5.00	5.00	1.00	—	—	0.1	
<b>R</b> SSSDR	10	2.00~7.00	7.00	1.20	—	—	0.2	
<b>E</b> SSDE	13	3.00~9.00	9.00	1.50	—	—	0.3	
<b>G</b> SSDDG	16	5.00~12.00	12.00	2.00	—	—	0.5	
	20	7.00~16.00	16.00	3.00	—	—	1.0	
	22	8.00~18.00	18.00	3.00	—	—	1.5	
	25	10.00~20.00	20.00	3.00	—	—	2.0	

Ⓜ 1 set consists of 8 spacers (1 of each t dimension).

Price **Quotation**

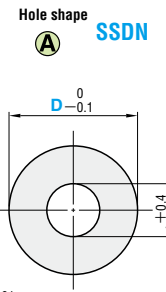
Alteration	Code	A	D R E G	1Code
Head	KC	Ⓜ Addition of single key flat	Ⓜ Key flat position 180° change 1° increments	Ⓜ Quotation

—For straight button die with relief holes—

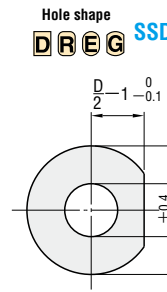


For shank diameter tolerance  $D_{m5}$ , select either m5 or  $+0.005_0$ .

Hole shape **A** SSDN



Hole shape **D R E G** SSDDHN



Ⓜ The outside and inside diameter has slight depression.

d	Catalog No. Type	D	T	Base unit price (5-piece set) 1~9 sets				
				T0.05	T0.1	T0.2	T0.5	T1.0
3.4	<b>SSDN</b> (for round die D6~25)	6	0.05					
4.4		8						
6.4		10						
8.4		13						
10.6		16						
12.6	<b>SSDDHN</b> (for shaped die D8~25)	20	0.1					
14.6		22	0.2					
16.6		25	0.5					
				1.0				

Ⓜ A set consists of 5 spacers of the same T dimension.  
For example, with T0.1, a set consists of 5 spacers of thickness 0.1.

Order **Catalog No.** — **T**  
SSDN 6 — 0.1

Days to Ship **Quotation**

Price **Quotation**