

# SCRAP RETENTION CARBIDE ANGULAR BUTTON DIES

—HEADED TYPE·STRAIGHT TYPE—



**—Headed—**

For shank diameter tolerance  $D_{m5}$ , select either m5 or  $+0.005/0$ .

**—Straight—**

For shank diameter tolerance  $D_{n5}$ , select either n5 or  $+0.005/0$ .

**RoHS**

**M H**

Shank diameter  $D$  tolerance

Catalog No.

V40 (HIP) 87~88HRA

$D_{m5}$

$D_{n5}$

For D4-5, relief taper is 1/50.

D	4~5	6~25
R	$R \leq 0.2$	$R \leq 0.5$

Hole shape A:  $P \geq W$ ,  $K = \sqrt{P^2 + W^2}$ ,  $P - 0.4 \geq 1.5$

Hole shape D:  $P \geq W$ ,  $K = \sqrt{P^2 + W^2}$ ,  $P - 0.4 \geq 1.5$

Hole shape R:  $P \geq W$ ,  $0.15 \leq R < \frac{W}{2}$ ,  $P - 2R \geq 1.5$

Hole shape E:  $P > W$

Hole shape G:  $P > W$ ,  $\sqrt{P^2 - W^2} \geq 1.5$

(P dimension straight section 1.5 mm or longer)

CARBIDE BUTTON DIES

D tolerance	Catalog No.		L	0.01mm increments				MT (workpiece material thickness)	C (clearance)	H	T
	D m5	n5		Type	A min. P	D R E G P·Kmax.	R P·Wmin.				
4	+0.009	+0.013	(4)	Straight (Dn5)	1.00	1.50	—	—	5	3	
5	+0.004	+0.008			SR-WAHD	SR-WASD	1.00	2.50			—
6			(5)	13	1.00	3.00	1.00	—	9		
8	+0.012	+0.016	6	16	1.00	4.00	1.00	—	11		
10	+0.006	+0.010	8	20	2.00	6.00	1.20	—	13		
13			10	22	3.00	8.00	1.50	—	16	5	
16	+0.015	+0.020	13	25	5.00	10.00	2.00	—	19		
20	+0.007	+0.012	16	(30)	7.00	12.00	2.00	—	23		
25	+0.017	+0.024	20	(35)	10.00	16.00	2.00	—	28		

⚡ D (4) and (5) are specifications available for shape (A) (round) only. They are not available for shapes D R E G.

⚡ L (30) · (35) → D8~25 Full length (30) · (35) are specifications available for D8~25 only. ⚡ Can be used only for workpiece materials with tensile strengths up to 1177 N/mm<sup>2</sup> (120kgf/mm<sup>2</sup>).

⚡ Workpiece material thickness and clearance are used as machining data for the scrap retention. Specify the shaped hole dimensions (P·W·R) when selecting the button die finishing dimensions.

**Order** Catalog No. — L — P — W — R (R only) — MT — C

SR-WAHDR 13 — 25 — P6.50 — W4.00 — R1.00 — MT1.50 — C0.105

**Days to Ship** **Quotation**

**Price** **Quotation**

**Alterations** Catalog No. — L(LC-SLC-LCT-LMT) — P(PC) — W(WC) — R — MT — C — (BC-HC-TC-CKC-MKC, etc.)

SR-WAHD 10 — 25 — P5.00 — W3.20 — MT1.50 — C0.105 — TC3.0—TKC

Alteration	Code	A	D R E G	1Code
Alterations to shaped hole	PC WC	Shaped hole diameter change		
		min.: $\frac{P}{W} > \frac{PC}{WC} \geq \frac{P \cdot W_{min}}{2} \geq 1.00$		
	0.01mm increments			
	max.: $\frac{P}{W} < \frac{PC}{WC} \leq P \cdot K_{max} + 0.2$			
Alterations to full length	LKC LKZ	Full length tolerance change		
		⚡ Cannot be used for L(LC) < 16.		
	Changes to head thickness tolerance and full length tolerance are processed using a single code. For the machining limit, refer to the description of each alteration.			
	TKC TKM LKC LKZ	Head thickness tolerance change + Full length tolerance change		
Alterations to shank	SLC	Changes to full length and full length tolerance are processed using a single code. The allowable range of change, increment, ordering process, and notes (⚡) are the same as for LC.		
		LC LKC	Full length tolerance change + Full length tolerance change	
	LCT LMT	Changes to head thickness tolerance, full length, and full length tolerance are processed using a single code. The ordering process is the same as for LC. For the machining limit and notes (⚡), refer to the description of each alteration.		
		TKC LC LKC LKZ	Head thickness tolerance change + Full length tolerance change + Full length tolerance change	
Head	WKC	Addition of double key flats in parallel		

Alteration	Code	A	D R E G	1Code
Alterations to head	KC	Addition of single key flat to head		
		⚡ Key flat position change 1° increments		
	KFC	Addition of single key flat		
		⚡ Key flat position change 1° increments		
Alterations to shank	TC	Head diameter change		
		⚡ Cannot be used for straight types.		
	TKC TKM	Head thickness tolerance change		
		⚡ Cannot be used for L(LC) < 16.		
Alterations to head	SKC	Single key flat on shank		
		⚡ Can be used for headed types only.		
	ANF	Angular angle change		
		⚡ Cannot be used for L(LC) < 16.		
KM	Addition of key groove to prevent lifting			
	⚡ Cannot be used for D < 6.			