

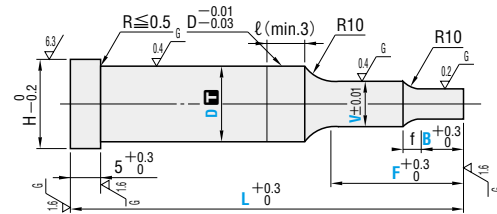


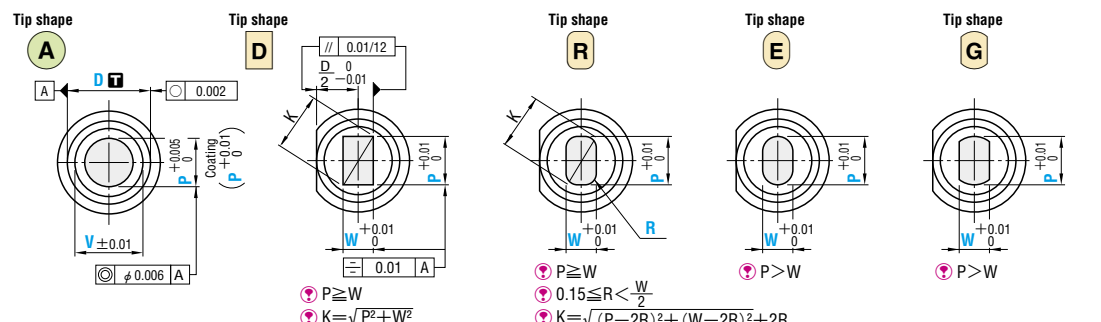
CARBIDE DOUBLE-STEPPED PUNCHES

—NORMAL · TiCN COATING—

PRODUCTS DATA

P. 1604

Type	Shank diameter D Tolerance	M H	Catalog No. Type Tip shape	The tip shape can be selected from tip shapes A ~ G in the figure below.
 ReHS —TiCN coating— 	Dm5	V30 (HIP) 88 ~ 89HRA Super fine grain (HIP) 90 ~ 92HRA (D3 ~ 6)	WPTW TiCN coating H—WPTW WXPTW TiCN coating H—WXPTW	 <p>The tip end of a TiCN coating punch is ground before the coating is applied. Although the marks of processing may remain in the center of a flange end face, it is satisfactory on a function.</p>
	D +0.005 / 0	V30 (HIP) 88 ~ 89HRA Super fine grain (HIP) 90 ~ 92HRA (D3 ~ 6)	A—WPTW TiCN coating AH—WPTW A—WXPTW TiCN coating AH—WXPTW	



Catalog No. Type Tip shape D	L (Selection)	0.001mm increments		Diagonal DREG Kmax.	0.01mm increments		DREG	0.1mm increments		DREG	0.1mm increments		H
		P	B		P-W	R		V	F				
WPTW (Dm5)	3 40-50-60	3	0.500 ~ 0.749	2.0 ~ 5.0	2.96	1.00 ~ 1.99	2.0 ~ 8.0	DREG	2.00 ~ 2.99	DREG	2.0 ~ 8.0	5	
			0.750 ~ 0.999	2.0 ~ 8.0		2.00 ~ 2.49			2.0 ~ 13.0				
			1.000 ~ 1.999	2.0 ~ 13.0		2.50 ~ 2.96			2.0 ~ 19.0				
WXPTW (D3 ~ 6)	4 40-50-60-70	4	0.500 ~ 0.749	2.0 ~ 5.0	3.96	1.00 ~ 1.99	2.0 ~ 8.0	DREG	2.00 ~ 2.49	DREG	2.0 ~ 8.0	7	
			0.750 ~ 0.999	2.0 ~ 8.0		2.50 ~ 3.96			2.0 ~ 13.0				
			1.000 ~ 1.999	2.0 ~ 13.0		2.50 ~ 3.96			2.0 ~ 19.0				
H—WPTW (D3 ~ 6)	5 40-50-60-70	5	0.500 ~ 0.749	2.0 ~ 5.0	4.96	1.00 ~ 1.99	2.0 ~ 8.0	DREG	2.00 ~ 2.49	DREG	2.0 ~ 8.0	8	
			0.750 ~ 0.999	2.0 ~ 8.0		2.50 ~ 3.99			2.0 ~ 13.0				
			1.000 ~ 1.999	2.0 ~ 13.0		4.00 ~ 4.96			2.0 ~ 19.0				
H—WXPTW (D3 ~ 6)	6 40-50-60-70	6	0.500 ~ 0.749	2.0 ~ 5.0	5.96	1.00 ~ 1.99	2.0 ~ 8.0	DREG	2.00 ~ 2.49	DREG	2.0 ~ 8.0	9	
			0.750 ~ 0.999	2.0 ~ 8.0		2.50 ~ 3.99			2.0 ~ 13.0				
			1.000 ~ 1.999	2.0 ~ 13.0		4.00 ~ 5.96			2.0 ~ 19.0				
A—WPTW (D3 ~ 6)	8 40-50-60-70-80	8	0.500 ~ 0.749	2.0 ~ 5.0	7.96	1.00 ~ 1.99	2.0 ~ 8.0	DREG	2.00 ~ 2.49	DREG	2.0 ~ 8.0	11	
			0.750 ~ 0.999	2.0 ~ 8.0		2.50 ~ 3.99			2.0 ~ 13.0				
			1.000 ~ 1.999	2.0 ~ 13.0		4.00 ~ 7.96			2.0 ~ 19.0				
AH—WPTW (D3 ~ 6)	10 40-50-60-70-80	10	0.500 ~ 0.749	2.0 ~ 5.0	9.96	1.00 ~ 1.99	2.0 ~ 8.0	DREG	2.00 ~ 2.49	DREG	2.0 ~ 8.0	13	
			0.750 ~ 0.999	2.0 ~ 8.0		2.50 ~ 3.99			2.0 ~ 13.0				
			1.000 ~ 1.999	2.0 ~ 13.0		4.00 ~ 9.96			2.0 ~ 19.0				
AH—WXPTW (D3 ~ 6)	13 40-50-60-70-80	13	0.500 ~ 0.749	2.0 ~ 5.0	12.96	1.00 ~ 1.99	2.0 ~ 8.0	DREG	2.00 ~ 2.49	DREG	2.0 ~ 8.0	16	
			0.750 ~ 0.999	2.0 ~ 8.0		2.50 ~ 3.99			2.0 ~ 13.0				
			1.000 ~ 1.999	2.0 ~ 13.0		4.00 ~ 12.96			2.0 ~ 19.0				
AH—WXPTW (D3 ~ 6)	16 40-50-60-70-80	16	0.500 ~ 0.749	2.0 ~ 5.0	15.96	1.00 ~ 1.99	2.0 ~ 8.0	DREG	2.00 ~ 2.49	DREG	2.0 ~ 8.0	19	
			0.750 ~ 0.999	2.0 ~ 8.0		2.50 ~ 3.99			2.0 ~ 13.0				
			1.000 ~ 1.999	2.0 ~ 13.0		4.00 ~ 15.96			2.0 ~ 19.0				

V > D - 0.03 → ℓ = 0 If V > D - 0.03, D = 0.01 (press-in lead) is not included. For TiCN coating, P min. is 1.00mm. P dimension increments → For TiCN coating, increments are 0.01mm. (If used with PKC alteration, 0.001mm increments can be selected.)

Order Catalog No. — L — P — W — B — V — F — R (R only)
 WPTWA 10 — 80 — P9.500 — B25 — V9.80 — F40
 A—WPTWR13 — 80 — P10.50 — W7.34 — B10 — V12.00 — F30 — R0.5

Days to Ship Quotation

Alterations Catalog No. — (LC·LCT·LMT) — P — W — B — V — F — R — (HC·TC·KC, etc.)
 WPTWA 10 — LC72 — P4.800 — B10 — V6.80 — F40 — HC12

Alteration	Code	A		DREG		1Code	
		Change	Tolerance	Change	Tolerance		
Alterations to tip	PRC	Rounding of tip side edge 0.3 ≤ PRC ≤ 1 0.1mm increments PRC ≤ (P-0.2)/2 Cannot be combined with PCC-GC.	±0.05	—	—	—	
	PCC	Chamfering to tip side edge 0.3 ≤ PCC ≤ 1 0.1mm increments PCC ≤ (P-0.2)/2 Cannot be combined with PRC-GC.	±0.05	—	—	—	
	GC	Tip length B ≥ P+2 f = P/2 × tan(90° - GC°) Tip edges are rounded. Cannot be used for P ≤ 1.000. Cannot be combined with LKC-LKZ-LCT-LMT-PRC-PCC.	—	—	—	—	
	SC	Tip roughness change	0.08 GL	0.02 GL	0.02 GL	0.02 GL	—
	PKC	Tip tolerance change Normal P +0.005 → ±0.003 Coating P +0.01 → ±0.005 Coating cannot be used for D16. P dimension increment remains the same.	—	—	Tip tolerance change (P-W dimensions can be selected in 0.001mm increments.) P-W +0.01 → ±0.005 Cannot be used with coating.	—	—
Alterations to head	PKV	Tip tolerance change Normal P +0.005 → ±0.002 Coating P +0.01 → ±0.005 P dimension increment remains the same.	—	—	—	—	
	VKC	V dimension tolerance change V ± 0.01 → ±0.005 V dimension can be selected in 0.01mm increments. Cannot be used with TiCN coating.	—	—	—	—	
	TC	Head diameter change D ≤ HC < H 0.1mm increments	—	—	—	—	
Alterations to full length	LC	Full length change 25 + F ≤ LC < L 0.1mm increments (If combined with LKC, 0.01 mm increments can be selected.)	—	—	—	—	
	LCT	Changes to head thickness tolerance and full length are processed using a single code. The allowable range of change, increment, ordering process, and notes (⊕) are the same as for LC.	—	—	—	—	
	LMT	Changes to head thickness tolerance and full length are processed using a single code. The allowable range of change, increment, ordering process, and notes (⊕) are the same as for LC.	—	—	—	—	
	TKC	Head thickness tolerance change T +0.3 → +0.02 Full length tolerance change L +0.3 → +0.1	—	—	—	—	
	TKM	Head thickness tolerance change T +0.3 → -0.02 Full length tolerance change L +0.3 → +0.1	—	—	—	—	
Alterations to shank	SKK	Single key flat on shank D3 ~ 6 V ≤ D - 1.2 (Machining width 0.5) D8 ~ V ≤ D - 2.2 (Machining width 1) Cannot be combined with KC-WKC-KFC.	—	—	—	—	
	NDC	No press-in lead ℓ ≥ 3 → ℓ = 0	—	—	—	—	

Price Quotation

Quotation