

CARBIDE FLANGE STOPPER PUNCHES

—NORMAL·TiCN COATING—



Type	Shank diameter D	tolerance	RoHS	Catalog No.	Shape
	D +0.005	0	RoHS	WXPAL TiCN coating H—WXPAL	
	D -0.001	-0.006		—Minus D tolerance— B—WXPAL TiCN coating BH—WXPAL	
—Air hole type—	D +0.005	0	RoHS	WXJHAL TiCN coating H—WXJHAL	
	D -0.001	-0.006		—Minus D tolerance— B—WXJHAL TiCN coating BH—WXJHAL	

Catalog No.	Type	D	L	0.001mm increments (A)		T	1mm increments B	V	d1	R	Base unit price 1 ~ 4 pieces					
				min.	P max.						WXPAL	H—WXPAL	WXJHAL	H—WXJHAL		
WXPAL —TiCN coating— B—WXPAL BH—WXPAL	4	40	50	1.000	3.000	13	16	20	2	2 ~ 6	2 ~ 3	WXPAL	H—WXPAL	WXJHAL	H—WXJHAL	
						25	30	35								
	5	40	50	60	1.500	4.000	13	16	20	3	2 ~ 8	4	WXPAL	H—WXPAL	WXJHAL	H—WXJHAL
							25	30	35							
With air hole WXJHAL —TiCN coating— B—WXJHAL BH—WXJHAL	4	40	50	60	70	13	16	20	2	2 ~ 10	10	WXPAL	H—WXPAL	WXJHAL	H—WXJHAL	
						25	30	35								
	5	40	50	60	70	2.000	6.000	13	16	20	3	2 ~ 8	WXPAL	H—WXPAL	WXJHAL	H—WXJHAL
								25	30	35						

⚡ P(1.00)→For TiCN coating, Pmin. is 1.00. ⚡ P dimension increments→For TiCN coating, increments are 0.01mm.

Order Catalog No. — L — P — T — B
WXPAL4 — 40 — P0.560 — T16 — B3
B—WXPAL5 — 60 — P3.000 — T20 — B5

Price Quotation

Days to Ship Quotation



Alterations Catalog No. — L(LC) — P — T(TC) — B — (LKC-SC, etc.)
B—WXPAL5 — 60 — P3.000 — T15.0 — B5

Alteration	Code	Spec.	1Code
Rounding of tip side edge 0.3 ≤ PRC ≤ 1 0.1mm increments ⚡ PRC ≤ (P-0.2)/2 ⚡ Cannot be combined with PCC-GC. ⚡ With air hole, PRC ≤ (P-d1-0.5)/2	PRC		
Chamfering to tip side edge 0.3 ≤ PCC ≤ 1 0.1mm increments ⚡ PCC ≤ (P-0.2)/2 ⚡ Cannot be combined with PRC-GC. ⚡ With air hole, PCC ≤ (P-d1-0.5)/2	PCC		
20° ≤ GC < 90° 1° increments Tip length B ≥ f+2 f = P/2 × tan(90° - GC°) ⚡ When used with SC, tip edge are rounded. ⚡ Cannot be used for P ≤ 1.000. ⚡ Cannot be combined with LKC-LKZ-PRC-PCC. ⚡ Cannot be combined with punches with air holes.	GC		Quotation
Tip roughness change 0.2 → 0.08	SC		

Alteration	Code	Spec.	1Code
Tip tolerance change Normal P +0.005 0 → +0.003 0 Coating P +0.01 0 → +0.005 0	PKC		
	Tip tolerance change (P dimension increment remains the same.) Normal P +0.005 0 → ±0.002 Coating P +0.01 0 → ±0.005	PKV	
Full length change 40 < LC < L 0.1mm increments (If combined with LKC-LKZ, 0.01mm increments can be selected.) ⚡ If LC < 50, T and TC are 20 or less. ⚡ If LC < 50 with D6-8, the allowable range of change for B is 2 ~ 10.		LC	
	Full length tolerance change L +0.3 0 → +0.05 0	LKC	
Full length tolerance change L +0.3 0 → +0.01 0 ⚡ Cannot be used with TiCN coating.		LKZ	
	Dimension T change 13 < TC < 25 0.1mm increments ⚡ When L < 50, the allowable range of change is 13 < TC < 20. ⚡ The full length L remains the same.	TC	

CARBIDE STRAIGHT PUNCHES

—NORMAL·LAPPING·TiCN COATING—



Type	RoHS	Catalog No.	Shape
	RoHS	WPC Lapping L—WPC	
		V30 (HIP) 88 ~ 89HRA TiCN coating H—WPC (No.1.6 ~ 10)	
		(No.1.6 ~ 6) WXPC Lapping L—WXPC	
		Super fine grain (HIP) 90 ~ 92HRA TiCN coating H—WXPC	

Catalog No.	Type	No.	L	0.001mm increments (A)		H	T	Base unit price 1 ~ 4 pieces					
				min.	P max.			WPC	L—WPC	H—WPC	WXPC	L—WXPC	H—WXPC
WPC	No.1.6 ~ 6	1.0	20 25 30	0.500	1.000	2.0							
		1.6	20 25 30 35	1.000	1.600	2.6							
WXPC	No.1.6 ~ 6	2.0	20 25 30 35 40 50	1.600	2.000	3.0							
		2.5	20 25 30 35 40 50 60	2.000	2.500	3.5							
L—WPC	No.1.6 ~ 6	3	40 50 60	2.000	3.000	5							
		4	40 50 60 70	3.000	4.000	7							
L—WXPC	No.1.6 ~ 6	5	40 50 60 70	4.000	5.000	8							
		6	40 50 60 70	5.000	6.000	9							
H—WPC	No.1.6 ~ 10	8	40 50 60 70 80	6.000	8.000	11							
		10	40 50 60 70 80	8.000	10.000	13							

⚡ 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
WPC 2.5 — 40 — P2.050 Days to Ship Quotation Price Quotation

Alterations Catalog No. — L(LC-LCT-LMT) — P — (HC-TC, etc.)
WPC 2.5 — 40 — P2.050 — PKC

Alteration	Code	Spec.	1Code
Rounding of tip side edge 0.3 ≤ PRC ≤ 1 0.1mm increments ⚡ PRC ≤ (P-0.2)/2 ⚡ Cannot be combined with PCC-GC.	PRC		
	Chamfering to tip side edge 0.3 ≤ PCC ≤ 1 0.1mm increments ⚡ PCC ≤ (P-0.2)/2 ⚡ Cannot be combined with PRC-GC.	PCC	
20° ≤ GC < 90° 1° increments f = P/2 × tan(90° - GC°) ⚡ With lapping, tip edges are rounded. ⚡ Cannot be used for P ≤ 1.000. ⚡ Cannot be combined with LKC-LKZ-LCT-LMT-PRC-PCC.		GC	
	Tip roughness change The base material is finished before the coating is applied. ⚡ Can be used for coating types only.	SC	
Tip tolerance change Normal-lapping P +0.005 0 → +0.003 0 Coating P +0.01 0 → +0.005 0		PKC	
	Tip tolerance change (P dimension increment remains the same.) Normal-lapping P +0.005 0 → ±0.002 Coating P +0.01 0 → ±0.005	PKV	
Full length change 20 ≤ LC < L 0.1mm increments (If combined with LKC-LKZ, 0.01mm increments can be selected.) 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.		LC	
	Full length tolerance change T +0.3 0 → +0.02 0 + Full length change L +0.3 0 → +0.1 0	LCT	
Full length tolerance change T +0.3 0 → -0.02 0 + Full length change L +0.3 0 → +0.1 0		LMT	

Alteration	Code	Spec.	1Code
Full length tolerance change L +0.3 0 → +0.05 0 ⚡ Cannot be used for No.1.0.	LKC		
	Full length tolerance change L +0.3 0 → +0.01 0 ⚡ Cannot be used with TiCN coating. ⚡ Cannot be used for No.1.0.	LKZ	
Addition of single key flat to head ⚡ Cannot be used for No.1.0 ~ 2.5. ⚡ Cannot be combined with KFC.		KC	
	Addition of double key flats in parallel ⚡ Cannot be used for No.1.0 ~ 2.5. ⚡ Cannot be combined with KFC.	WKC	
Double key flats at 0° and a selected angle 1° increments 270° 90° 180° ⚡ Cannot be combined with KC-WKC.		KFC	
	Head diameter change P ≤ HC < H 0.01mm increments ⚡ Cannot be used for No.1.0. ⚡ For coating, 2.6 ≤ HC < H	HC	
Head thickness change 2 ≤ TC < T 0.1mm increments (If combined with TKC-TKM-LCT-LMT, 0.01mm increments can be selected.) ⚡ Full length L is shortened by (T-TC). ⚡ If combined with LC-LCT-LMT, full length is equal to LC. ⚡ For coating, 4 ≤ TC < T ⚡ Cannot be used for No.1.0.		TC	
	Head thickness tolerance change L +0.3 0 → +0.02 0 ⚡ Cannot be used for No.1.0.	TKC	
Head thickness T +0.3 0 → 0 -0.02 ⚡ Cannot be used for No.1.0.		TKM	
	Chamfering of head. This improves the strength of the punch head. ⚡ P.1611 0.1mm increments 0.5 ≤ TCC ≤ (H-P)/2 ⚡ If H ≤ 5, then TCC is 0.5. ⚡ Cannot be used for No.1.0.	TCC	