

PRECISION CARBIDE PUNCHES WITH KEY GROOVES

PRECISION CARBIDE PUNCHES WITH KEY GROOVES AND AIR HOLES

Type	RoHS	Catalog No.	Shape
	RoHS	VKAS VKAL Lapping L-VKAS L-VKAL	<p> T⁰-0.01 D^{-0.01}-0.03 5±0.05 R10 U^{+0.2} B^{+0.3}/₀ L^{+0.1}/₀ P^{+0.002}/₀ 0.0015 0.0003 0.0015 </p> <p> T_{≥2.0} Although the marks of processing may remain in the center of a flange end face, it is satisfactory on a function. </p>
	Super fine grain (HIP)	VXKAS VXKAL Lapping L-VXKAS L-VXKAL	

Type	RoHS	Catalog No.	Shape
	RoHS	VJKAS VJKAL Lapping L-VJKAS L-VJKAL	<p> T⁰-0.01 D^{-0.01}-0.03 5±0.05 R10 U^{+0.2} B^{+0.3}/₀ L^{+0.1}/₀ P^{+0.002}/₀ 0.0015 0.0003 0.0015 </p> <p> T_{≥2.0} Air hole of super fine grain type is straight. Dimensions S and d₂ do not exist. </p>
	Super fine grain (HIP)	VXJKAS VXJKAL Lapping L-VXJKAS L-VXJKAL	

Type	D	L						0.001mm increments min. P max.	0.1mm increments T	B	U		
		40	45	50	55	60	65					70	
 VKAS Lapping L-VKAS VXKAS Lapping L-VXKAS	3	40	45	50	55	60	1.000~2.990	T _{≥2.0}	8	0.5			
	4	40	45	50	55	60	65				70	1.000~3.990	
	5	40	45	50	55	60	65				70	2.000~4.990	
	6	40	45	50	55	60	65				70	2.000~5.990	
 VKAL Lapping L-VKAL VXKAL Lapping L-VXKAL	3			50	55	60	1.000~2.990		T _{≥2.0}	13	0.5		
	4			50	55	60	65					70	1.000~3.990
	5			50	55	60	65					70	2.000~4.990
	6			50	55	60	65					70	2.000~5.990
				50	55	60	65					70	1.000~2.990
				50	55	60	65					70	2.000~4.990

Type	D	L						0.001mm increments min. P max.	0.1mm increments T	B	d ₁	S	d ₂	U							
		40	45	50	55	60	65								70						
 VJKAS Lapping L-VJKAS VXJKAS Lapping L-VXJKAS	4	40	45	50	55	60	1.500~3.990	T _{≥2.0}	8	0.5	20	1.2	0.5								
	5	(40)	45	50	55	60	65							70	2.000~4.990						
	6	(40)	45	50	55	60	65							70	2.000~5.990						
 VJKAL Lapping L-VJKAL VXJKAL Lapping L-VXJKAL	4			50	55	60	1.500~3.990							T _{≥2.0}	13	0.5	20	1.2	0.5		
	5			50	55	60	65													70	2.000~4.990
	6			50	55	60	65													70	2.000~5.990
				50	55	60	65		70	1.500~3.990											
				50	55	60	65		70	2.000~4.990											
				50	55	60	65		70	2.000~5.990											

⊕ If P>D-0.03, D^{-0.01}/_{-0.03} on tip side (press-in lead) is not included.

⊕ L(40) → S=17 If full length is (40), dimension S is 17mm.
 ⊕ Air hole of super fine grain type is straight.
 ⊕ If P>D-0.03, D^{-0.01}/_{-0.03} on tip side (press-in lead) is not included. Dimensions S and d₂ do not exist.

Order **Catalog No.** L P T
 VKAS 4 - 50 - P1.002 - T15.0

Price **Quotation**

Days to Ship **Quotation**

Alterations **Catalog No.** L(LC) P(PC) T (BC-LKC-UK, etc.)
 VKAS 4 - LC43 - P1.002 - T15.0 - LKC

Alteration	Code	Spec.	1Code
	PC	Tip dimension change PC≥Pmin./2≥0.500 0.001mm increments	
	BC	Tip length change 2≤BC≤Bmax. 0.1mm Full length L must be at least 25mm longer than tip length BC.	
	PRC	Rounding of tip side edge 0.3≤PRC≤1 0.1 mm increments PRC≤(P-0.2)/2 ⊗ Cannot be combined with PCC·GC.	
	PCC	Chamfering to tip side edge 0.3≤PCC≤1 0.1mm increments PCC≤(P-0.2)/2 ⊗ Cannot be combined with PRC·GC.	
	GC	20°≤GC<90° 1° increments Tip length B≥f+2 f=P/2·tan(90°-GC°) ⊗ Cannot be used for P≤1.00. ⊗ Cannot be combined with LKC·PRC·PCC. ⊕ Punches with lapping are rounded at the edges.	

Alteration	Code	Spec.	1Code					
	LC	Full length change 25+B(C)≤LC<L 0.1mm increments (if combined with LKC, 0.01mm increments can be selected.) ⊕ If difference between full length and tip length is 25mm or less, tip length is adjusted to (Full length-25mm).						
	LKC	Full length tolerance L+0.1 ⇄ +0.01 change						
	UK	Key groove depth change <table border="1"> <tr> <td>D</td> <td>UK</td> </tr> <tr> <td>4-5</td> <td>0.7</td> </tr> <tr> <td>6</td> <td>1.2</td> </tr> </table> ⊗ Cannot be used for D3.		D	UK	4-5	0.7	6
D	UK							
4-5	0.7							
6	1.2							
	SKC	Single key flat on shank P≤D-1.2 (Machining width 0.5)						
	NDC	No press-in lead ℓ=3 ⇄ ℓ=0						

■ Fixing keys for punches with key grooves
 P.245



Order **Catalog No.** L P T
 VJKAL 5 - 55 - P2.500 - T20.0

Example

Can also be used in combination with a long jector pin (LJ). (Can be used for D≥5).
 Cannot be used for super fine grain types.

Days to Ship **Quotation**

Price **Quotation**

Alterations **Catalog No.** L(LC-LC) P(PC) T (BC-LKC-UK, etc.)
 VJKAL 5 - 55 - P2.500 - T20.0 - BC10

Alteration	Code	Spec.	1Code
	PC	Tip dimension change PC≥PCmin. 0.001mm increments ⊗ Cannot be used for D4.	
	BC	Tip length change 2≤BC<B 0.1mm increments	
	PRC	Rounding of tip side edge 0.3≤PRC≤1 0.1mm increments PRC≤(P-d ₁ -0.5)/2 ⊗ Cannot be combined with PCC.	
	PCC	Chamfering to tip side edge 0.3≤PCC≤1 0.1mm increments PCC≤(P-d ₁ -0.5)/2 ⊗ Cannot be combined with PRC.	
	LC	Full length change LC<L 0.1mm increments (if combined with LKC, 0.01mm increments can be selected.) ⊕ B and S dimensions are shortened by (L-LC).	

Alteration	Code	Spec.	1Code						
	LCX	Full length change with the same tip length B 25+B(BC)≤LCX<L 0.1mm increments ⊕ If difference between full length and tip length is 25mm or less, tip length is adjusted to (Full length-25mm). (If combined with LKC, 0.01mm increments can be selected.) ⊗ Cannot be used for V30.							
	LKC	Full length tolerance L+0.1 ⇄ +0.01 change							
	UK	Key groove depth change <table border="1"> <tr> <td>D</td> <td>UK</td> </tr> <tr> <td>4-5</td> <td>0.7</td> </tr> <tr> <td>6</td> <td>1.2</td> </tr> </table> ⊗ Cannot be used for V30.		D	UK	4-5	0.7	6	1.2
D	UK								
4-5	0.7								
6	1.2								
	SKC	Single key flat on shank P≤D-1.2 (Machining width 0.5) ⊗ Cannot be used with V30.							
	NDC	No press-in lead ℓ=3 ⇄ ℓ=0							