

# CARBIDE BLOCK PUNCH TIP BLANKS

Shank dimensions V·H	Type	Diagram	RoHS
V30 (HIP) 88~89HRA V·H 3~20	ZPDB —Normal—		RoHS
V30 (HIP) 88~89HRA V·H 8~20	ZPDM —Tapped—		RoHS
V30 (HIP) 88~89HRA V·H 3~20	ZPDK —With key groove—		RoHS
V30 (HIP) 88~89HRA V·H 3~16	ZPDF —Single flange—		RoHS
V30 (HIP) 88~89HRA V·H 3~16	ZPDW —Double flanges—		RoHS

Additional machining cost will be required for the following types.

- Tapped (ZPDM)
- With key groove (ZPDK)
- Single flange (ZPDF)
- Double flanges (ZPDW)

**Quotation**

**Price Quotation**

Catalog No.	Shank / tip dimensions (mm)										L	B			M	(a)	U		
	Type	H	V	3	4	5	6	8	10	13		16	20	T				L 40	L 50
ZPDB	3	1.0	1.5	2.0	2.5	3.0	3.0	4.0	5.0	7.0	8.0	40	T <sub>≥2</sub>	13	13	13	—	—	1.0
ZPDK	4	1.0																	
ZPDF	5	2.0																	
ZPDW	6	2.0																	
ZPDB	8	2.0																	
ZPDK	10	2.5																	
ZPDF	13	3.0																	
ZPDW	16	4.0																	
ZPDB	20	5.0																	
ZPDK																			
ZPDF																			
ZPDW																			

P<sub>≥</sub>V-0.05 ... P=V If P<sub>≥</sub>V-0.05, P dimension is equal to V dimension.  
W<sub>≥</sub>H-0.05 ... W=H If W<sub>≥</sub>H-0.05, W dimension is equal to H dimension.

**Order**

(1) If tip is at center of shank

Catalog No.	V	H	L	0.01mm increments	0.1mm increments	K·F·WF
ZPDB	20	08	60	P18.00	W 4.00	
ZPDM	20	10	70	P16.00	W 9.00	T25.0 KO
ZPDK	20	06	60	P 8.00	W 5.00	F90
ZPDF	16	13	60	P15.00	W12.00	WF0
ZPDW	16	10	40	P 8.00	W 5.00	

(2) If tip is not at center of shank

Catalog No.	V	H	L	0.01mm increments	0.1mm increments	K·F·WF	0.01mm increments
ZPDF	16	13	50	P15.00	W12.00	F90	X0.00~Y0.15

(X and Y must be set either to 0 or to 0.02 or more. Tolerance ±0.01)

**Days to Ship Quotation**

**Alterations**

Catalog No.	V	H	L(LC)	P(PC)·W(WC)·R·X·Y	T	K·F·WF	(BC·VKC...etc.)
ZPDK	20	08	60	P18.00-WC1.50	T25	LKZ	

Alteration	Code	Spec.	1Code																																									
Alterations to tip	PC	Tip dimension change PC <sub>≥</sub> V×0.3 <sub>≥</sub> 1.00 WC <sub>≥</sub> H×0.15 <sub>≥</sub> 0.50 0.01mm increments	P(PC)·W(WC)·B max. 0.50~0.99 8 1.00~1.99 13 2.00~2.99 20 3.00~4.99 30 5.00~ 35																																									
	BC	Tip length change 2 <sub>≤</sub> BC <sub>≤</sub> Bmax. 0.1mm increments L <sub>≥</sub> BC+30 Full length (L) must be at least 30mm longer than tip length (BC).																																										
	LC	Full length change 30+B(BC) <sub>≤</sub> LC<L 0.1mm increments (if combined with LKC·LKZ, 0.01mm increments can be selected.) If difference between full length (LC) and tip length (B) is 30mm or less, tip length is adjusted to (Full length-30).																																										
	LKC	Full length tolerance change	L +0.3 → +0.05 L +0.1 → 0																																									
Alterations to full length	LKZ	Full length tolerance change	L +0.3 → +0.01 L +0.1 → 0																																									
	HC	Flange width change 0 <sub>≤</sub> HC<1.5 0.1mm increments																																										
Alterations to flange	TC	Flange thickness change 2 <sub>≤</sub> TC<5 0.1mm increments (if combined with TKC·TKM, 0.01mm increments can be selected.) Full length L is shortened by (5-TC). If combined with LC, full length is equal to LC.																																										
	TKC	Flange thickness tolerance change	T +0.2 → +0.02 T 0 → 0																																									
	TKM	Flange thickness tolerance change	T +0.2 → -0.02 T 0 → 0																																									
Alterations to tap	FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage. Cannot be used for normal, tapped, and key groove types.																																										
	MC	Tap diameter change	<table border="1"> <thead> <tr> <th>H</th> <th>V</th> <th>8</th> <th>10</th> <th>13</th> <th>16</th> <th>20</th> </tr> </thead> <tbody> <tr> <td>8</td> <td>—</td> <td>—</td> <td>—</td> <td>M4→M3</td> <td>—</td> <td>—</td> </tr> <tr> <td>10</td> <td>—</td> <td>—</td> <td>—</td> <td>M6→M5</td> <td>—</td> <td>—</td> </tr> <tr> <td>13</td> <td>—</td> <td>—</td> <td>—</td> <td>M8→M6</td> <td>—</td> <td>—</td> </tr> <tr> <td>16</td> <td>—</td> <td>—</td> <td>—</td> <td>M8→M6</td> <td>—</td> <td>—</td> </tr> <tr> <td>20</td> <td>—</td> <td>—</td> <td>—</td> <td>M8→M6</td> <td>—</td> <td>—</td> </tr> </tbody> </table> (a) size is M×2+4mm (reference value).	H	V	8	10	13	16	20	8	—	—	—	M4→M3	—	—	10	—	—	—	M6→M5	—	—	13	—	—	—	M8→M6	—	—	16	—	—	—	M8→M6	—	—	20	—	—	—	M8→M6	—
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16	—	—	—	M8→M6	—	—																																						
20	—	—	—	M8→M6	—	—																																						

Alteration	Code	Spec.	1Code
Key groove	RTC	Key groove position tolerance change T 0 → +0.05 0	
	WK	Addition of key groove at symmetrically opposite position H = (2×U(UK)) <sub>≥</sub> 2.0 (KO) V = (2×U(UK)) <sub>≥</sub> 2.0 (K90) An additional key groove is added at a position symmetrically opposite to the specified key groove. Can be combined with UK. Can be used for key groove types.	
	UK	Key groove depth change 0.5 <sub>≤</sub> UK <sub>≤</sub> U+0.2 0.1mm increments H(V) - UK <sub>≥</sub> 2.0 Can be combined with WK. Can be used for key groove types.	
Alterations to shape	CC	Chamfering to four corners of shank The four corners of shank are chamfered to C0.5. The distance between shank corners and the tip must be 0.5mm or more.	
	CCP	Chamfering to one corner of shank (for error prevention) One corner of shank is chamfered to C1.0. Can be used if distances a and b from tip corners to shank meet the following conditions. a+b <sub>≥</sub> 1.3 Tip corner Tip corner Selection of chamfering position Can be used for normal and tapped types only.	
	VKC	Shank tolerance change	V·H +0.005 → +0.003 0
	VKM	Shank tolerance change	V·H +0.005 → -0.003 0
VHM	Shank tolerance change	V·H +0.005 → 0 -0.005	
DC	Addition of press-in lead 3mm (V·H <sub>≥</sub> 0.01) Cannot be used for flanged types.		