

# CARBIDE PILOT PUNCHES

## CARBIDE PILOT PUNCHES



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Name Catalog No.	CARBIDE PILOT PUNCHES			CARBIDE PILOT PUNCHES WITH KEY GROOVE		
	—Normal type—	—Lapping type—	—TiCN coating type—	—Normal type—	—Minus D tolerance—	
Delivery	③	③	⑧(C)	③	③	
Page	423	423	425	427	429	



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CARBIDE STRAIGHT PILOT PUNCHES			CARBIDE STRAIGHT PILOT PUNCHES WITH KEY GROOVE			CARBIDE PILOT PUNCHES—Fixed in stripper plate—		
—Normal type—	—Lapping type—	—TiCN coating type—	—Normal type—	—Lapping type—	—TiCN coating type—	—Normal type—	—Lapping type—	—TiCN coating type—
③	③	⑧(C)	③	③	⑧(C)	③	③	⑧(C)
431	431	431	432	433	433	433	433	434



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CARBIDE STRAIGHT PILOT PUNCHES—Fixed in stripper plate—			CARBIDE PILOT PUNCHES—Tip R-Tapered integrated type—Flange minus tolerance—		
—Normal type—	—Lapping type—	—TiCN coating type—	—Normal type—	—Lapping type—	—TiCN coating type—
③	③	⑧(C)	③	③	⑧(C)
435	435	436	437	437	437

New



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CARBIDE STRAIGHT PILOT PUNCHES—Tip R-Tapered integrated type—Flange minus tolerance—			CARBIDE PILOT PUNCHES—Movable type—		
—Normal type—	—Lapping type—	—TiCN coating type—	—Normal type—	—Lapping type—	—TiCN coating type—
③	③	⑧(C)	③	③	⑧(C)
438	438	438	439	439	439

# CARBIDE PILOT PUNCHES LIST

Printed in red are new products added and additional specifications.

Type	Material	Tip	Shank diameter tolerance	Standard	Lapping type	TiCN coating type		
Carbide Standard	V30(HIP)	R	Dm5 D +0.005 0	WSTA A-WSTA	P.423	L-WSTA AL-WSTA	H-WSTA AH-WSTA	P.425
		Taper	Dm5 D +0.005 0	WTPA A-WTPA		L-WTPA AL-WTPA	H-WTPA AH-WTPA	
Carbide With key groove	V30(HIP)	R	Dm5 D +0.005 D -0.001 -0.006	WKSTA A-WKSTA B-WKSTA	P.427 P.429	Alteration SC		P.428 P.430
		Taper	Dm5 D +0.005 D -0.001 -0.006	WKTPA A-WKTPA B-WKTPA	P.427 P.429			
Carbide Straight	V30(HIP)	R	—	WSTC	P.431	L-WSTC	H-WSTC	P.431
		Taper	—	WTTC		L-WTTC	H-WTTC	
Carbide With key groove Straight	V30(HIP)	R	—	WKSTC	P.432	Alteration SC		P.432
		Taper	—	WKTTTC				
Carbide Fixed in stripper plate	V30(HIP)	R	Dm5 D +0.005 0	WSPTP A-WSPTP	P.433	L-WSPTP AL-WSPTP	H-WSPTP AH-WSPTP	P.434
		Taper	Dm5 D +0.005 0	WTPTP A-WTPTP		L-WTPTP AL-WTPTP	H-WTPTP AH-WTPTP	
		Tip acute angle	Dm5 D +0.005 0	WAPTP A-WAPTP		L-WAPTP AL-WAPTP	H-WAPTP AH-WAPTP	
Carbide Fixed in stripper plate Straight	V30(HIP)	R	—	WSPT	P.435	L-WSPT	H-WSPT	P.436
		Taper	—	WTPT		L-WTPT	H-WTPT	
		Tip acute angle	—	WAPT		L-WAPT	H-WAPT	
Carbide Fixed in stripper plate	V30(HIP)	R & Taper	Dm5	WSPTPF	P.437	L-WSPTPF	H-WSPTPF	P.437
Carbide Fixed in stripper plate Straight	V30(HIP)	R & Taper	—	WSPTF	P.438	L-WSPTF	H-WSPTF	P.438
Carbide Movable	V30(HIP)	Tip acute angle	Dg6 D -0.005 D -0.010	WUPT A-WUPT	P.439	L-WUPT AL-WUPT	H-WUPT AH-WUPT	P.439

## Shank diameter tolerance Dm5

D	Tolerance (Unit:mm)
1.6	
2.0	+0.006
2.5	+0.002
3	
4	
5	+0.009
6	+0.004
8	+0.012
10	+0.006
13	+0.015
16	+0.007

## Shank diameter tolerance Dg6

D	Tolerance (Unit:mm)
1.6	
2.0	-0.002
2.5	-0.008
3	
4	
5	-0.004
6	-0.012
8	-0.005
10	-0.014
13	-0.006
16	-0.017

# CARBIDE BUTTON DIES

## CARBIDE BUTTON DIES



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Name	CARBIDE BUTTON DIES	SCRAP RETENTION CARBIDE BUTTON DIES	CARBIDE BUTTON DIES FOR PREVENTING CLOGGING OF SCRAP
Catalog No.	③-⑤⑧	③-⑤⑧	③
Delivery	443	445	447
Page			



[Price Cut]



[Price Cut]



[Price Cut]

Name	CARBIDE ANGULAR BUTTON DIES	SCRAP RETENTION CARBIDE ANGULAR BUTTON DIES	CARBIDE ANGULAR BUTTON DIES FOR PREVENTING CLOGGING OF SCRAP
Catalog No.	③-⑤⑧-⑧	③-⑤⑧	③
Delivery	449	451	453
Page			



[Price Cut]



SPACER FOR BUTTON DIE  
—For angular button die—

③(A)

456



SPACER FOR BUTTON DIE  
—For straight button die drain hole—

①

456

Name	CARBIDE BUTTON DIE BLANKS	SPACER FOR BUTTON DIE —For angular button die—	SPACER FOR BUTTON DIE —For straight button die drain hole—
Catalog No.	③(A)	③(A)	①
Delivery	455	456	456
Page			

# CARBIDE BUTTON DIES

## — GUIDE —

These products are manufactured and sold exclusively in Japan by MISUMI with the technical tie-up with KRANSKI GmbH in Germany.

Type	Material	Shank dimension tolerance	Normal		page	For scrap retention		page	For preventing crogging of scrap	
			Round	Shaped		Round	Shaped		Round	page
Carbide head type	V40(HIP)	Dm5 D <sup>+0.005</sup> <sub>0</sub>	WHD	WHD□	P.443	SR—WHD	SR—WHD□	P.445	SV—WHD	P.447
			A—WHD	A—WHD□		SRA—WHD	SRA—WHD□		SVA—WHD	
Carbide straight	V40(HIP)	Dn5 D <sup>+0.005</sup> <sub>0</sub>	WSD	WSD□	P.443	SR—WSD	SR—WSD□	P.445	SV—WSD	P.447
			A—WSD	A—WSD□		SRA—WSD	SRA—WSD□		SVA—WSD	
Carbide angular head type	V40(HIP)	Dm5 D <sup>+0.005</sup> <sub>0</sub>	WAHD	WAHD□	P.449	SR—WAHD	SR—WAHD□	P.451	SV—WAHD	P.453
			A—WAHD	A—WAHD□		SRA—WAHD	SRA—WAHD□		SVA—WAHD	
Carbide angular straight type	V40(HIP)	Dn5 D <sup>+0.005</sup> <sub>0</sub>	WASD	WASD□	P.449	SR—WASD	SR—WASD□	P.451	SV—WASD	P.453
			A—WASD	A—WASD□		SRA—WASD	SRA—WASD□		SVA—WASD	

### Scrap retention button dies (Products Data P.1137)

#### Available range

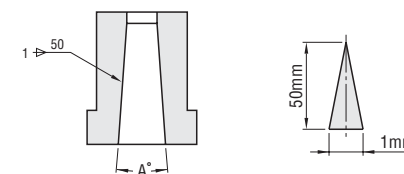
- Hole diameter.....  $\phi 1.0 \sim \phi 16$
- Workpiece material..... With tensile strength up to 1177N/mm<sup>2</sup> (120Kgf/mm<sup>2</sup>)
- Thickness of machining materials..... 0.15mm or greater
- The scrap retention effect cannot be expected when the clearance (C) of either side is larger than the workpiece thickness (MT) by 20%. Therefore, keep the difference to 20% or less when using this type.

Either side of clearance (C) < workpiece thickness (MT) × 20%

The scrap retention button dies prevent a slug from being pulled up by forming small protrusions on the slug. Therefore, this type is not appropriate when precision holes are required or punched-out slugs are sold as a product.

### Scrap retention button dies (Products Data P.1139)

### Notation for dimensions of button die relief angle



1/50 indicates a taper having a length of 50mm with 1mm of broadened end.

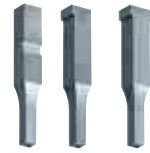
Taper	1/50	1/100	1/150
Angle (A°)	1.146°	0.573°	0.382°

# CARBIDE BLOCK PUNCHES

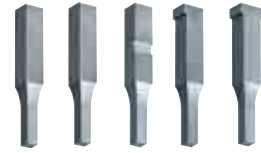
## CARBIDE BLOCK PUNCHES



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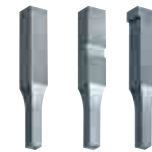
Name	CARBIDE BLOCK PUNCHES	CARBIDE BLOCK PUNCHES WITH AIR HOLE	CARBIDE BLOCK PUNCHES - Free size type -
Catalog No.	ZP□BL ZP□ML ZP□KL ZP□FL ZP□WL	ZJ□BL ZJ□KL ZJ□FL ZJ□WL	FZP□BL FZP□ML FZP□KL FZP□FL FZP□WL
Delivery	(5)	(10)	(10)
Page	459	461	465



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CARBIDE STRAIGHT PUNCHES	CARBIDE STRAIGHT PUNCHES WITH AIR HOLE	CARBIDE BLOCK PUNCH BLANKS	CARBIDE BLOCK PUNCH BLANKS
ZPC□ ZMC□ ZKC□ ZFC□ ZWC□	ZJC□ ZJK□ ZJC□ ZJWC□	ZPDB ZPDM ZPDK ZPDF ZPDW	ZPB B-ZPB ZPM ZPK B-ZPK ZPF ZPW
(5)	(10)	(5)(8)	(5)(8)
469	471	477	479



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CARBIDE BLOCK PUNCH BLANKS WITH AIR HOLE	CARBIDE BLOCK MATERIALS
ZJB ZJK ZJF ZJW	Z
(10)	(1)
481	483

New Add.

# CARBIDE BLOCK PUNCHES LIST

## GUIDE

Shank type	□	Standard	Free size type
Carbide normal type		V30(HIP) ZP□BL P.459	FZP□BL P.465
Carbide with air hole		V30(HIP) ZJ□BL P.461	
Carbide with tapping		V30(HIP) ZP□ML P.459	FZP□ML P.465
Carbide with key groove		V30(HIP) ZP□KL P.459	FZP□KL P.465
Carbide with air hole with key groove		V30(HIP) ZJ□KL P.459	
Carbide single flange		V30(HIP) ZP□FL P.459	FZP□FL P.465
Carbide with air hole single flange		V30(HIP) ZJ□FL P.461	
Carbide double flange		V30(HIP) ZP□WL P.459	FZP□WL P.465
Carbide with air hole double flange		V30(HIP) ZJ□WL P.461	
Carbide straight		V30(HIP) ZPC□ P.469	
Carbide with air hole straight		V30(HIP) ZJC□ P.471	
Carbide straight with tapping		V30(HIP) ZMC□ P.469	
Carbide straight with key groove		V30(HIP) ZKC□ P.469	
Carbide with air hole straight with key groove		V30(HIP) ZJK□ P.471	
Carbide straight single flange		V30(HIP) ZFC□ P.469	
Carbide with air hole straight single flange		V30(HIP) ZJFC□ P.471	
Carbide straight double flange		V30(HIP) ZWC□ P.469	
Carbide with air hole straight double flange		V30(HIP) ZJWC□ P.471	

### Carbide block punch precision standard

	Accuracy standard	Perpendicularity
Perpendicularity	$a \leq 0.005$	$c \leq 0.005$
Parallelism	$b \leq 0.005$	$d \leq 0.005$

# CARBIDE BLOCK DIES

# CARBIDE BLOCK DIES —GUIDE—

These products are manufactured and sold exclusively in Japan by MISUMI with the technical tie-up with **KRAMSKI** GmbH in Germany.

## CARBIDE BLOCK DIES



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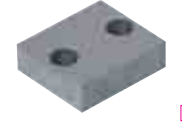
Name	CARBIDE BLOCK DIES —Straight type, Single flange type—	SCRAP RETENTION CARBIDE BLOCK DIES	BLOCK DIES —Free size type—
Catalog No.	(B)(C)	(B)(C)	(B)(C)
Delivery	(B)(C)	(B)(C)	(B)(C)
Page	487	489	491



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SCRAP RETENTION CARBIDE BLOCK DIES (FREE SIZE TYPE)	CARBIDE BLOCK DIE BLANKS WBLDB WBLDBF	CARBIDE BLOCK DIE BLANKS ZD ZDA ZD B ZD C
(B)(C)	(B)(C)	(B)(C)(D)
492	493	494 - 495

## Carbide block dies list

Type	Material	Shank dimension tolerance	Normal			For scrap retention		
			Round	Shaped	page	Round	Shaped	page
Carbide block straight type	V40(HIP)	V·H <sup>+0.005</sup> <sub>0</sub>	WBLD	WBLD□	P.487	SR-WBLD	SR-WBLD□	P.489
Carbide block single flange type	V40(HIP)	V·H <sup>+0.005</sup> <sub>0</sub>	WBLDF	WBLD□F	P.487	SR-WBLDF	SR-WBLD□F	P.489
Carbide block free size type	V40(HIP)	V·H <sup>+0.005</sup> <sub>0</sub>	WFBLD	WFBLD□	P.491	SR-WFBLD	SR-WFBLD□	P.492

## Scrap retention block dies (For details, see P.1137)

### • Available range

- Hole diameter... φ 1.0~ φ 16
- Workpiece material... With tensile strength up to 1177N/mm<sup>2</sup> (120kgf/mm<sup>2</sup>)
- Thickness of machining materials... 0.1mm or greater
- The scrap retention effect cannot be expected when the clearance (C) of either side is larger than the workpiece thickness (MT) by 20%. Therefore, keep the difference to 20% or less when using this type.

Either side of clearance (C) < workpiece thickness (MT) × 20%

- The scrap retention block dies prevent a slug from being pulled up by forming small protrusions on the slug. Therefore, this type is not appropriate when precision holes are required or punched-out slugs are sold as a product.