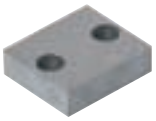
CARBIDE BLOCK DIES

CARBIDE BLOCK DIES

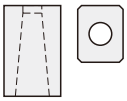
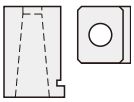
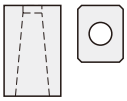
Product name Catalog No.	CARBIDE BLOCK DIES —STRAIGHT, SINGLE FLANGE—	SCRAP RETENTION CARBIDE BLOCK DIES	CARBIDE BLOCK DIES —CONFIGURABLE SIZE—
Page	517	519	521



SCRAP RETENTION CARBIDE BLOCK DIES (CONFIGURABLE SIZE)	CARBIDE BLOCK DIE BLANKS WBLDB WBLDBF	CARBIDE BLOCK DIE BLANKS ZD ZDA ZD□B ZD□C
522	523	524・525

CARBIDE BLOCK DIES
—GUIDE—

■Carbide block dies list

Block die type		M	Shape tolerance	Without scrap retention			With scrap retention		
				Round	Shaped	Page	Round	Shaped	Page
Carbide block dies straight		V40(HIP)	V・H$^{+0.005}_{0}$	WBLD	WBLD□	P.517	SR—WBLD	SR—WBLD□	P.519
Carbide block dies with single flange		V40(HIP)	V・H$^{+0.005}_{0}$	WBLDF	WBLD□F	P.517	SR—WBLDF	SR—WBLD□F	P.519
Carbide block dies (configurable size)		V40(HIP)	V・H$^{+0.005}_{0}$	WFBLD	WFBLD□	P.521	SR—WFBLD	SR—WFBLD□	P.521

■ Scrap retention block dies (For details, see P.1103)

- Applicable range
  1. Hole diameter: ϕ1.0 ～ ϕ16
  2. Workpiece material: Can be used for materials up to a maximum tensile strength to 1,177N/mm^2 (120kgf/mm^2).
  3. Thickness of workpiece material: Minimum thickness 0.15mm
  4. Scrap retention effects cannot be expected when the clearance (C) is larger than the workpiece material thickness (MT) by more than 20%. Therefore, keep the difference to 20% or less.

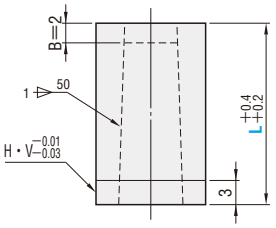
Clearance on one side (C) < Workpiece material thickness (MT) ×20%

Because scrap retention block dies prevent scrap lifting by forming small projections on punching scrap, they are not suitable in cases such as punching of precision holes, or when the punched-out item becomes the product.

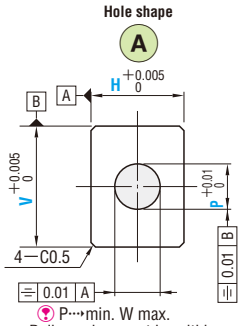
CARBIDE BLOCK DIES
—STRAIGHT TYPE・SINGLE FLANGE TYPE—

—Straight— RoHS

M H	Catalog No.
V40(HIP) 87～88HRA	Ⓐ WBLD Ⓓ WBLDD Ⓡ WBLDR Ⓔ WBLDE Ⓖ WBLDG



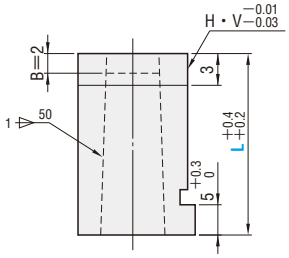
Hole shape



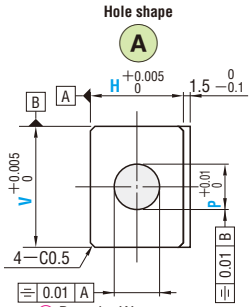
P⋯min. W max.
P dimension must be within the range of W dimension.

—Single flange— RoHS

M H	Catalog No.
V40(HIP) 87～88HRA	Ⓐ WBLDF Ⓓ WBLDDF Ⓡ WBLDRF Ⓔ WBLDEF Ⓖ WBLDGF



Hole shape



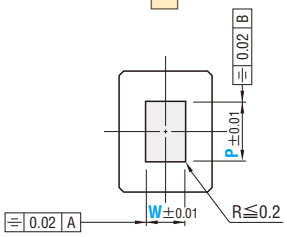
P⋯min. W max.
P dimension must be within the range of W dimension.

Catalog No.		H	V min. P max. / min. W max.	6	8	10	13	16	20	25	R	L
Straight	Single flange			1.00 ～ 3.00	1.00 ～ 4.00	1.00 ～ 6.00	1.00 ～ 8.00	1.00 ～ 10.00	1.50 ～ 12.00	1.50 ～ 16.00		
Ⓐ WBLD	WBLDF	6	1.00～ 3.00	○	○	○	○	○	○	○	0.15≦R＜$\frac{W}{2}$ (Ⓡ only)	16
Ⓓ WBLDD	WBLDDF	8	1.00～ 4.00		○	○	○	○	○	○		20
Ⓡ WBLDR	WBLDRF	10	1.00～ 6.00			○	○	○	○	○		22
Ⓔ WBLDE	WBLDEF	13	1.00～ 8.00				○	○	○	○		25
Ⓖ WBLDG	WBLDGF	16	1.00～ 10.00					○	○	○		30
		20	1.50～ 12.00						○	○		35
		25	1.50～ 16.00							○		

P・W・R⋯0.01mm increments

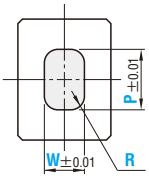
P Price Quotation

Hole shape **D**



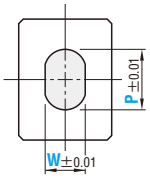
P≧W

Hole shape **R**



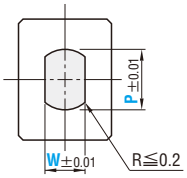
P≧W
0.15≦R<$\frac{W}{2}$

Hole shape **E**



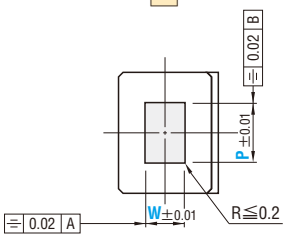
P>W

Hole shape **G**



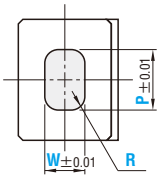
P>W

Hole shape **D**



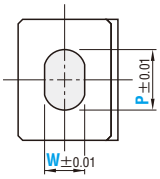
P≧W

Hole shape **R**



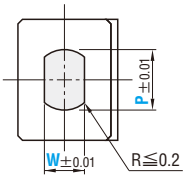
P≧W
0.15≦R<$\frac{W}{2}$

Hole shape **E**



P>W

Hole shape **G**

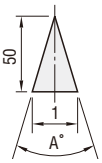


P>W

Order

Catalog No.	V	H	—	L	—	0.01mm increments				
						P	—	W	—	R (Ⓡ only)
WBLDR	13	10	—	20	—	P6.34	—	W4.65	—	R1.50

Days to Ship Quotation

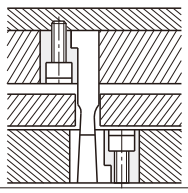


• $\frac{50}{1}\triangleright$ indicates a taper in which the diameter increases by 1mm over 50mm of length.

Taper	1/50
Angle (A°)	1.146°

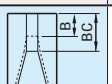
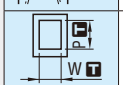
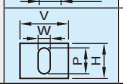
■Flange holder P.365

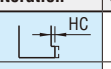
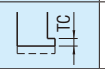
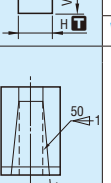
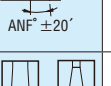
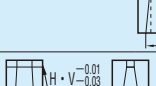
HFW



Alterations

Catalog No.	V	H	—	L(LC)	—	P—W—R	— (BC・HC, etc.)
WBLDF	08	06	—	20	—	P1.20	— PKC — ANF1.2

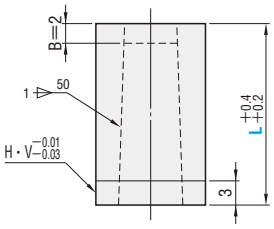
Alteration		Code	Ⓐ	DⓇEG	1Code
Alterations to shaped hole		BC	Shaped hole depth change 0≦BC≦4 0.1mm increments		Quotation
		PKC	Shaped hole tolerance change $P^{+0.01}_{0}\Rightarrow{}^{+0.005}_{0}$	Shaped hole tolerance change $P\cdot W\pm0.01\Rightarrow{}^{+0.01}_{0}$	
		HVC	—	H and V are reversed relative to shaped hole. P dimension is machined in direction H and W dimension is machined in direction V. P→min. W max.	
Alterations to full length		LC	Full length change 10≦LC<L 0.1mm increments (If combined with LKC・LKZ, 0.01mm increments can be selected.) For single flange types, if LC≦12 then press-in lead is not included.		
		LKC	Full length tolerance change $L^{+0.4}_{+0.2}\Rightarrow{}^{+0.05}_{0}$		
		LKZ	Full length tolerance change $L^{+0.4}_{+0.2}\Rightarrow{}^{+0.01}_{0}$		

Alteration		Code	Ⓐ	DⓇEG	1Code
Alterations to flange		HC	Flange width change 0≦HC<1.5 0.1mm increments		Quotation
		TC	Flange thickness change 2≦TC<5 0.1mm increments (If combined with TKC・TKM, 0.01mm increments can be selected.) Full length is shortened by (5—TC). If combined with LC, full length is equal to LC.		
		TKC	Flange thickness tolerance change $T^{+0.3}_{0}\Rightarrow{}^{+0.02}_{0}$		
		TKM	Flange thickness tolerance change $T^{+0.3}_{0}\Rightarrow{}^{0}_{-0.02}$		
Others		VKC	Shape tolerance change $H\cdot V^{+0.005}_{0}\Rightarrow{}^{+0.003}_{0}$		
		VKM	Shape tolerance change $H\cdot V^{+0.005}_{0}\Rightarrow{}^{0}_{-0.003}$		
		VHM	Shape tolerance change $H\cdot V^{+0.005}_{0}\Rightarrow{}^{0}_{-0.005}$		
		ANF	Angular angle change 0≦ANF≦1.2 0.2° increments d≦dmax. d=P+2{(L—B)tan(ANF°)} P—B tan(ANF°)≧0.6 W—B tan(ANF°)≧0.6	V: 6→d max. 3.4; 8→4.4; 10→6.4; 13→8.4; 16→10.6; 20→12.6; 25→14.6. Taper 1/50, Angle (one side) 0.573°	
		NDC		⇨No press-in lead	

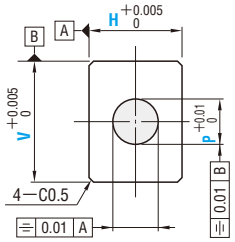
SCRAP RETENTION CARBIDE BLOCK DIES
—STRAIGHT TYPE / SINGLE FLANGE TYPE—

—Straight— RoHS

M H	Catalog No.
V40(HIP) 87～88HRA	Ⓐ SR—WBLD Ⓓ SR—WBLDD Ⓡ SR—WBLDR Ⓔ SR—WBLDE Ⓖ SR—WBLDG



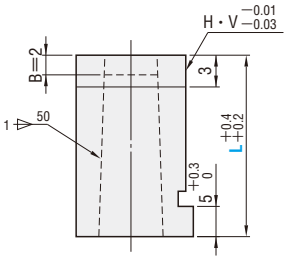
Hole shape



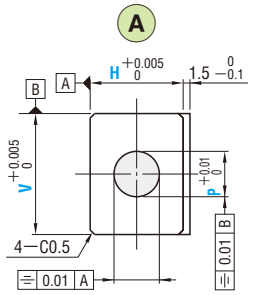
P⋯ min. W max.
P dimension must be within the range of W dimension.

—Single flange— RoHS

M H	Catalog No.
V40(HIP) 87～88HRA	Ⓐ SR—WBLDF Ⓓ SR—WBLDDF Ⓡ SR—WBLDRF Ⓔ SR—WBLDEF Ⓖ SR—WBLDGF



Hole shape



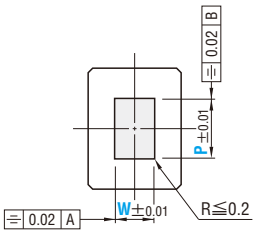
P⋯ min. W max.
P dimension must be within the range of W dimension.

Catalog No.		H	V min. P max. / min. W max.	6 1.00～3.00	8 1.00～4.00	10 1.00～6.00	13 1.00～8.00	16 1.00～10.00	20 1.50～12.00	25 1.50～16.00	R	L	MT (workpiece material thickness) 0.01mm increments	C (clearance) 0.005mm increments
Straight	Single flange													
Ⓐ SR—WBLD	SR—WBLDF	6	1.00～3.00	○	○	○	○	○	○	○	0.15≦R＜W/2 (Ⓡ only)	16 20 22 25 30 35	MT≧0.15 Select a workpiece material thickness of 0.15mm or more.	C≧0.010 Select a clearance of 0.010mm or more.
Ⓓ SR—WBLDD	SR—WBLDDF	8	1.00～4.00		○	○	○	○	○	○				
Ⓡ SR—WBLDR	SR—WBLDRF	10	1.00～6.00			○	○	○	○	○				
Ⓔ SR—WBLDE	SR—WBLDEF	13	1.00～8.00				○	○	○	○				
Ⓖ SR—WBLDG	SR—WBLDGF	16	1.00～10.00					○	○	○				
		20	1.50～12.00						○	○				
		25	1.50～16.00							○				

P・W・R⋯0.01mm increments Can be used only for workpiece materials with tensile strengths up to 1177N/mm² (120kgf/mm²).
Workpiece material thickness and clearance are used as machining data for the scrap retention. Specify the shaped hole dimensions (P・W・R) when selecting the die finishing dimensions.

P Price **Quotation**

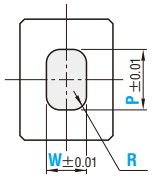
Hole shape D



- P≧W
- P−0.4≧1.5

(P dimension straight section 1.5 mm or longer)

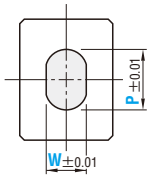
Hole shape R



- P≧W
- 0.15≦R<$\frac{W}{2}$
- P−2R≧1.5

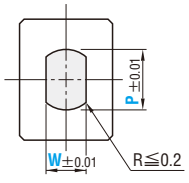
(P dimension straight section 1.5 mm or longer)

Hole shape E



- P>W

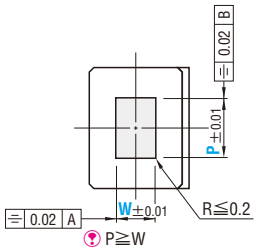
Hole shape G



- P>W
- $\sqrt{P^2-W^2}$≧1.5

(P dimension straight section 1.5 mm or longer)

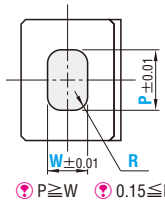
Hole shape D



- P≧W
- P−0.4≧1.5

(P dimension straight section 1.5 mm or longer)

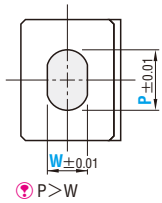
Hole shape R



- P≧W
- 0.15≦R<$\frac{W}{2}$
- P−2R≧1.5

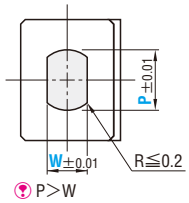
(P dimension straight section 1.5 mm or longer)

Hole shape E



- P>W

Hole shape G



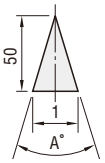
- P>W
- $\sqrt{P^2-W^2}$≧1.5

(P dimension straight section 1.5 mm or longer)

Order

Catalog No.	V	H	—	L	—	0.01mm increments: P	—	W	—	R (Ⓡ only)	—	MT	—	C
SR—WBLDRF	13	10	—	22	—	P7.65	—	W4.65	—	R0.50	—	MT1.50	—	C0.105

Days to Ship Quotation

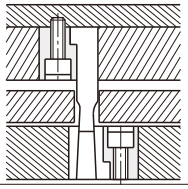


- $\frac{50}{1}$ indicates a taper in which the diameter increases by 1mm over 50mm of length.

Taper	1/50
Angle (A°)	1.146°

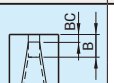
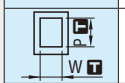
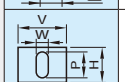
Flange holder P.365

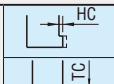
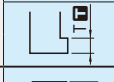
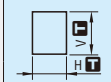
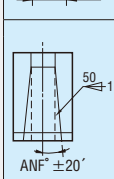
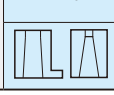
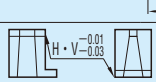
HFW



Alterations

Catalog No.	V	H	—	L(LC)	—	P—W—R	—	MT	—	C	— (BC・LKC, etc.)
SR—WBLDF	08	06	—	20	—	P2.25	—	MT1.50	—	C0.105	— LKC—ANF1.2

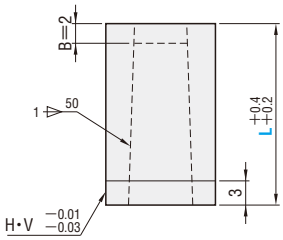
Alteration		Code	Ⓐ	ⒹⓇⒺⒼ	1Code
Alterations to shaped hole		BC	Shaped hole depth change 1≦BC<Bmax. 0.1mm increments P: 1.00～1.99 → Bmax. 3; 2.00～ → 4	Shaped hole depth change 1≦BC<2 0.1mm increments	Quotation
		PKC	Shaped hole tolerance change $P^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	Shaped hole tolerance change $P\cdot W\pm0.01$ ⇨ $^{+0.01}_{0}$	
		HVC	——	H and V are reversed relative to shaped hole. P dimension is machined in direction H and W dimension is machined in direction V. Ⓟ P→min. W max.	
Alterations to full length		LC	Full length change 10≦LC<L 0.1mm increments (If combined with LKC・LKZ, 0.01mm increments can be selected.) Ⓟ For single flange types, if LC≦12 then press-in lead is not included.		
		LKC	Full length tolerance change $L^{+0.4}_{+0.2}$ ⇨ $^{+0.05}_{0}$		
		LKZ	Full length tolerance change $L^{+0.4}_{+0.2}$ ⇨ $^{+0.01}_{0}$		

Alteration		Code	Ⓐ	ⒹⓇⒺⒼ	1Code
Alterations to flange		HC	Flange width change 0≦HC<1.5 0.1mm increments		Quotation
		TC	Flange thickness change 2≦TC<5 0.1mm increments (If combined with TKC・TKM, 0.01mm increments can be selected.) Ⓟ Full length is shortened by (5—TC). If combined with LC, full length is equal to LC.		
		TKC	Flange thickness tolerance change $T^{+0.3}_{0}$ ⇨ $^{+0.02}_{0}$		
		TKM	Flange thickness tolerance change $T^{+0.3}_{0}$ ⇨ $^{0}_{-0.02}$		
Others		VKC	Shape tolerance change $H\cdot V^{+0.005}_{0}$ ⇨ $^{+0.003}_{0}$		
		VKM	Shape tolerance change $H\cdot V^{+0.005}_{0}$ ⇨ $^{0}_{-0.003}$		
		VHM	Shape tolerance change $H\cdot V^{+0.005}_{0}$ ⇨ $^{0}_{-0.005}$		
		ANF	Angular angle change 0≦ANF≦1.2 0.2° increments Ⓟ d≦dmax. Ⓟ d=P+2{(L—B)tan(ANF°)} Ⓟ P—B tan(ANF°)≧0.6 W—B tan(ANF°)≧0.6 ANF° ±20′ V: 6→d max. 3.4; 8→4.4; 10→6.4; 13→8.4; 16→10.6; 20→12.6; 25→14.6 Taper 1/50 (Angle (one side) 0.573°)	
		NDC	 ⇨No press-in lead		

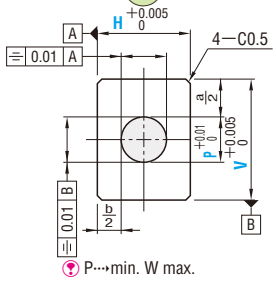
CARBIDE BLOCK DIES
—CONFIGURABLE SIZE TYPE—

—Straight— RoHS

M H	Catalog No.
V40(HIP) 87～88HRA	Ⓐ WFBLD Ⓓ WFBLDD Ⓡ WFBLDR Ⓔ WFBLDE Ⓖ WFBLDG

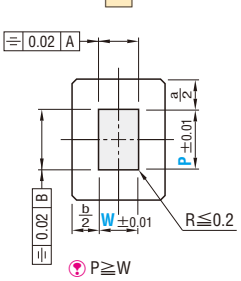


Hole shape Ⓐ



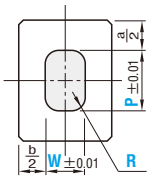
Ⓥ P⋯→min. W max.
P dimension must be within the range of W dimension.

Hole shape Ⓓ



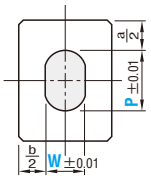
Ⓥ P≧W

Hole shape Ⓡ



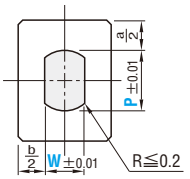
Ⓥ P≧W
Ⓥ 0.15≦R＜W/2

Hole shape Ⓔ



Ⓥ P＞W

Hole shape Ⓖ



Ⓥ P＞W

Catalog No.	H	V min. W max.	V min. P max.	amin. / bmin.	6.0～8.0	8.1～10.0	10.1～13.0	13.1～16.0	16.1～20.0	20.1～25.0	R	L
					1.00～4.00	1.00～6.00	1.00～8.00	1.00～10.00	1.50～12.00	1.50～16.00	R	
					4	4	5	6	8	9		
Ⓐ WFBLD Ⓓ WFBLDD Ⓡ WFBLDR Ⓔ WFBLDE Ⓖ WFBLDG	6.0～8.0	1.00～4.00	4		○	○	○	○	○	○	0.15≦R＜W/2 (Ⓡ only)	16
	8.1～10.0	1.00～6.00	4			○	○	○	○	○		20
	10.1～13.0	1.00～8.00	5				○	○	○	○		22
	13.1～16.0	1.00～10.00	6					○	○	○		25
	16.1～20.0	1.50～12.00	8						○	○		30
	20.1～25.0	1.50～16.00	9							○		35

Ⓥ V—P=a H—W=b (For shape Ⓐ, H—P=b)
Ⓥ P・W・R⋯→0.01mm increments V・H⋯→0.1mm increments

Order

Catalog No.	—	0.1mm increments V	—	H	—	L	—	0.01mm increments P	—	W	—	R (Ⓡ only)
WFBLDE	—	V15.8	—	H12.8	—	L22	—	P7.25	—	W5.75		

Days to Ship: Quotation

Price: Quotation

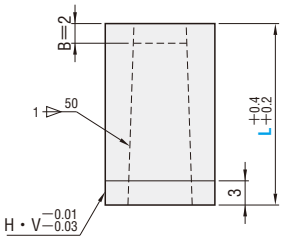
Alterations: Ⓥ Refer to the page at right.

SCRAP RETENTION CARBIDE BLOCK DIES
—CONFIGURABLE SIZE TYPE—

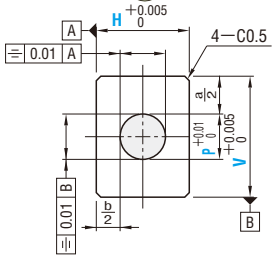
PRODUCTS DATA P.1103

—Straight— RoHS

M H	Catalog No.
V40(HIP) 87 ～ 88HRA	Ⓐ SR—WFBLD Ⓓ SR—WFBLDD Ⓡ SR—WFBLDR Ⓔ SR—WFBLDE Ⓖ SR—WFBLDG

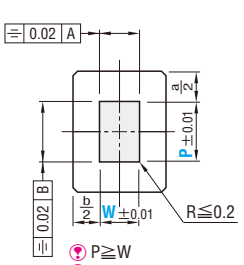


Hole shape Ⓐ



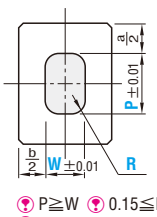
Ⓥ P⋯→min. W max.
P dimension must be within the range of W dimension.

Hole shape Ⓓ



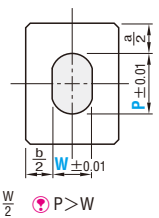
Ⓥ P≧W
Ⓥ P−0.4≧1.5
(P dimension straight section 1.5 mm or longer)

Hole shape Ⓡ



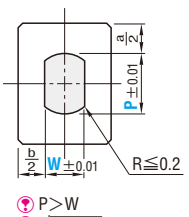
Ⓥ P≧W Ⓥ 0.15≦R<W/2
Ⓥ P−2R≧1.5
(P dimension straight section 1.5 mm or longer)

Hole shape Ⓔ

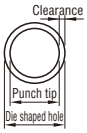


Ⓥ P>W

Hole shape Ⓖ



Ⓥ P>W
Ⓥ $\sqrt{P^2-W^2}\geqq 1.5$
(P dimension straight section 1.5 mm or longer)

Catalog No.	H	V min. W max.	V P max.	6.0～8.0	8.1～10.0	10.1～13.0	13.1～16.0	16.1～20.0	20.1～25.0	R	L	MT (workpiece material thickness)	C (clearance)
				1.00～4.00	1.00～6.00	1.00～8.00	1.00～10.00	1.50～12.00	1.50～16.00	R		0.01mm increments	0.005mm increments
			bmin. amin.	4	4	5	6	8	9				
Ⓐ SR—WFBLD Ⓓ SR—WFBLDD Ⓡ SR—WFBLDR Ⓔ SR—WFBLDE Ⓖ SR—WFBLDG	6.0～8.0	1.00～4.00	4	○	○	○	○	○	○	0.15≦R<W/2 (Ⓡ only)	16 20 22 25 30 35	MT≧0.15 Select a workpiece material thickness of 0.15mm or more.	C≧0.010 Select a clearance of 0.010mm or more. 
	8.1～10.0	1.00～6.00	4		○	○	○	○	○				
	10.1～13.0	1.00～8.00	5			○	○	○	○				
	13.1～16.0	1.00～10.00	6				○	○	○				
	16.1～20.0	1.50～12.00	8					○	○				
	20.1～25.0	1.50～16.00	9						○				

Ⓥ V—P=a H—W=b (For shape Ⓐ, H—P=b) Ⓥ P・W・R⋯→0.01mm increments V・H⋯→0.1mm increments Ⓥ Can be used only for workpiece materials with tensile strengths up to 1,177N/mm² (120kgf/mm²).
Ⓥ Workpiece material thickness and clearance are used as machining data for the scrap retention. Specify the shaped hole dimensions (P・W・R) when selecting the die finishing dimensions.

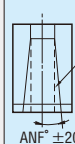
Order

Catalog No.	—	0.1mm increments V	—	H	—	L	—	0.01mm increments P	—	W	—	R (Ⓡ only)	—	MT	—	C		
SR—WFBLDE	—	V15.8	—	H12.8	—	L22	—	P7.27	—	W5.25			—	MT1.50	—	C0.105	Quotation	

Alterations

Catalog No.	—	V	—	H	—	L (LC)	—	P—W—R	—	(BC・LKC, etc.)		
SR—WFBLDD	—	V12.5	—	H9.5	—	LC28.5	—	P6.25—W4.75	—	LKC—ANF1.2	Quotation	

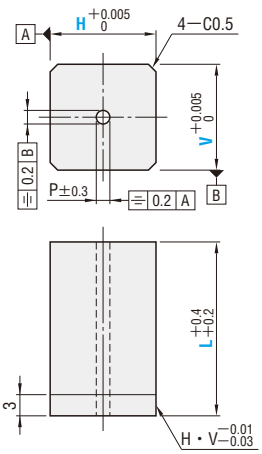
Alteration		Code	Ⓐ	Ⓓ Ⓡ Ⓔ Ⓖ	1Code
Alterations to shaped hole		BC	Shaped hole depth change 0≦BC≦4 0.1mm increments With scrap retention 1≦BC≦Bmax. 0.1mm increments P: 1.00～1.99 → Bmax. 3; 2.00～ → 4	Shaped hole depth change 0≦BC≦4 0.1mm increments With scrap retention 1≦BC<2 0.1mm increments	Quotation
		PKC	Shaped hole tolerance change P +0.01 0 ⇨ +0.005 0	Shaped hole tolerance change P・W±0.01 ⇨ +0.01 0	
		HVC	——	H and V are reversed relative to shaped hole. P dimension is machined in direction H and W dimension is machined in direction V. Ⓥ P→min. W max.	
Alterations to full length		LC	Full length change 10≦LC<L 0.1mm increments (If combined with LKC・LKZ, 0.01mm increments can be selected.)		
		LKC	Full length tolerance change L +0.4 +0.2 ⇨ +0.05 0		
		LKZ	Full length tolerance change L +0.4 +0.2 ⇨ +0.01 0		

Alteration		Code	Ⓐ	Ⓓ Ⓡ Ⓔ Ⓖ	1Code
Others		VKC	Shape tolerance change H・V +0.005 0 ⇨ +0.003 0		Quotation
		VKM	Shape tolerance change H・V +0.005 0 ⇨ 0 −0.003		
		VHM	Shape tolerance change H・V +0.005 0 ⇨ 0 −0.005		
		ANF	Angular angle change 0≦ANF≦1.2 0.2° increments Ⓥ d≦dmax. Ⓥ d=P+2{(L−B) tan(ANF°)} Ⓥ P−B tan(ANF°)≧0.6 W−B tan(ANF°)≧0.6 V: 6.0～ d max. 3.4; 8.0～ 4.4; 10.0～ 6.4; 13.0～ 8.4; 16.0～ 10.6; 20.0～ 12.6; 25.0 14.6 Taper 1/50; Angle (one side) 0.573°	
		NDC	No press-in lead		

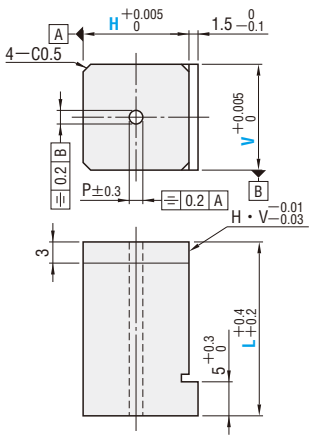
CARBIDE BLOCK DIE BLANKS

RoHS

Straight type
WBLDB



Single flange type
WBLDBF



M V40 (HIP)
H 87～88HRA

Catalog No.	H \ V	6	8	10	13	16	20	25	L	P
Straight type **WBLDB** / Single flange type **WBLDBF**	6	○	○	○	○	○	○	○	16	0.8
	8		○	○	○	○	○	○	20	
	10			○	○	○	○	○	22	
	13				○	○	○	○	25	
	16					○	○	○	30	
	20						○	○	35	
	25							○		

Order

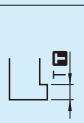
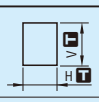
Catalog No.	V	H	—	L
WBLDB	08	06	—	16

Days to Ship Quotation

Price Quotation

Alterations

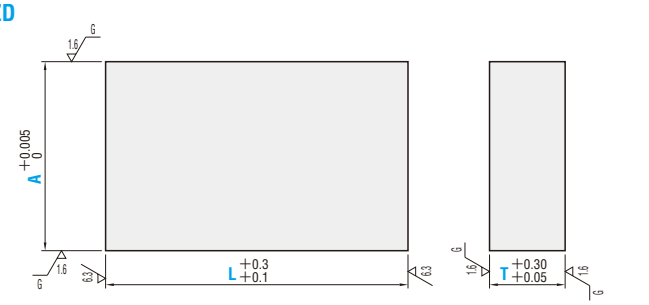
Catalog No.	V	H	—	L(LC)	—	(HC・TC・TKC, etc.)
WBLDBF	13	10	—	20	—	TC4

	Alteration	Code	Spec.	1Code
Alterations to full length		LC	Full length change 10≦LC＜L 0.1mm increments (If combined with LKC・LKZ, 0.01mm increments can be selected.) For single flange types, if LC≦12 then press-in lead is not included.	
		LKC	Full length tolerance change $L^{+0.4}_{+0.2} \Rightarrow {}^{+0.05}_{0}$	
		LKZ	Full length tolerance change $L^{+0.4}_{+0.2} \Rightarrow {}^{+0.01}_{0}$	
Alterations to flange		HC	Flange width change 0≦HC＜1.5 0.1mm increments	
		TC	Flange thickness change 2≦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.	Quotation
		TKC	Flange thickness tolerance change $T^{+0.3}_{0} \Rightarrow {}^{+0.02}_{0}$	
		TKM	Flange thickness tolerance change $T^{+0.3}_{0} \Rightarrow {}^{0}_{-0.02}$	
Others		VKC	Shape tolerance change $H \cdot V^{+0.005}_{0} \Rightarrow {}^{+0.003}_{0}$	
		VKM	Shape tolerance change $H \cdot V^{+0.005}_{0} \Rightarrow {}^{0}_{-0.003}$	
		VHM	Shape tolerance change $H \cdot V^{+0.005}_{0} \Rightarrow {}^{0}_{-0.005}$	
		NDC	 ⇨No press-in lead	

CARBIDE BLOCK DIE BLANKS

RoHS

ZD



M V30 (HIP)
H 88～89HRA

Catalog No.		A	L	Base unit price 1 ～ 4 pieces			
Type	T			L=40	L=50	L=60	L=70
ZD	10	10	40				
		13					
		16					
		20					
	13	13	50		Quotation		
		16	60				
		20	70				
	16	16					
		20					
	20	20					

Order

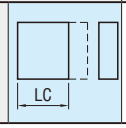
Catalog No.	A	—	L
ZD 10	16	—	50

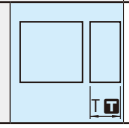
Days to Ship Quotation

Price Quotation

Alterations

Catalog No.	A	—	L(LC)	—	(TKC)
ZD 10	16	—	LC45	—	TKC

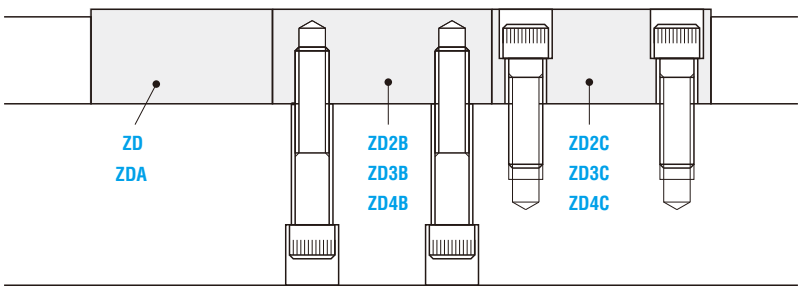
Alteration	Code	Spec.	1Code
Alterations to full length 	LC	30≦LC＜L 1mm increments	Quotation

Alteration	Code	Spec.	1Code
Alteration to thickness 	TKC	T tolerance change T +0.30 +0.05 ⇨ +0.01 0	Quotation

Example

Carbide block die blanks

- ZD: Thickness T・width A・length L are standard dimensions. Material is same as the punch (V30). ※Dimension L can be changed within the specified range.
- ZDA・ZD□B・ZD□C (P.567): Thickness T, width A, and length L can be specified in 0.01mm increments. Die material (V40) is used. ※The material can be changed to V20・V30 by alteration.



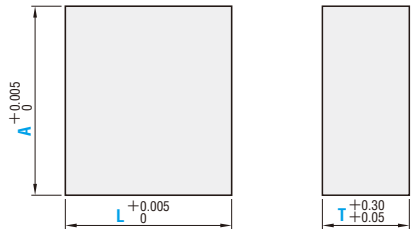
CARBIDE BLOCK DIE BLANKS
—MACHINED TYPE—

RoHS

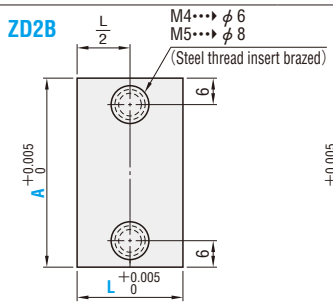
M V40(HIP)
H 87 ～ 88HRA

A	10.00～31.99	32.00～70.00
M	4	5
d_1	4.5	5.5
$d_2 \times t$	7.5 × 7	9 × 8

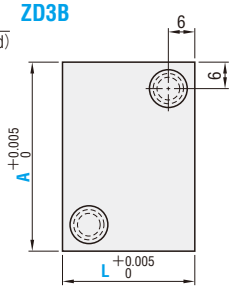
ZDA



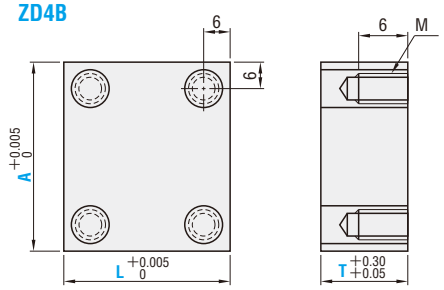
ZD2B



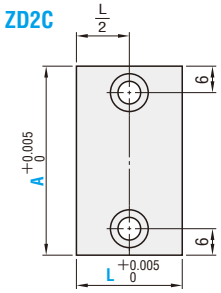
ZD3B



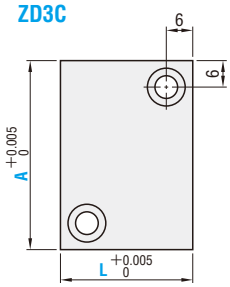
ZD4B



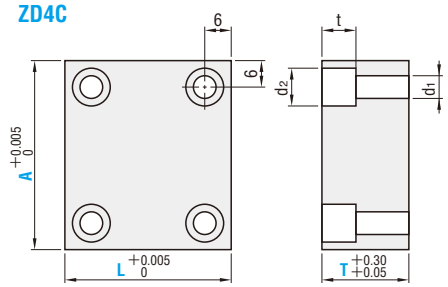
ZD2C



ZD3C



ZD4C



Catalog No.	T	A 0.01mm increments	L 0.01mm increments
ZDA	10 13	10.00～70.00	3.00 ～80.00
ZD2B ZD2C	16	30.00～70.00	13.00 ～70.00
ZD3B ZD3C	20 22	20.00～70.00	20.00 ～80.00
ZD4B ZD4C	25	30.00～70.00	25.00 ～80.00

Order

Catalog No.	T	—	0.01mm increments A	—	L
ZDA	16	—	16.00	—	40.00

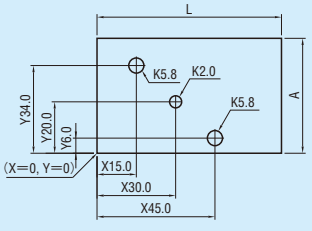
Days to Ship: Quotation

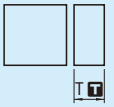
Price: Quotation

For larger orders, ask about prices/delivery.

Alterations

Catalog No.	T	—	A	—	L	—	X・Y・K	— (TKC・JC)
ZDA	25	—	45.00	—	70.00	—	X15.0 Y34.0 K5.8 X30.0 Y20.0 K2.0 X45.0 Y 6.0 K5.8	— TKC

Alteration	Code	Spec.	1Code
	X_ Y_ K_	Pilot holes for WEDM, dowel holes, and other holes can be machined. Specify the hole position (X and Y) and diameter (K). Increment for X・Y 0.1mm increments T=10・13・16⋯ φ1.0≦K≦φ10 T=20・22・25⋯ φ1.5≦K≦φ10 Increment for K 0.1mm increments Hole pitch tolerance ±0.3	Quotation

Alteration	Code	Spec.	1Code
	TKC	T dimension tolerance change T +0.30 +0.05 ⇨ +0.01 0	Quotation
M Material change	JC2	Material change M V40⇨V20	
	JC3	Material change M V40⇨V30	

■Accuracy standards