BLOCK PUNCHES

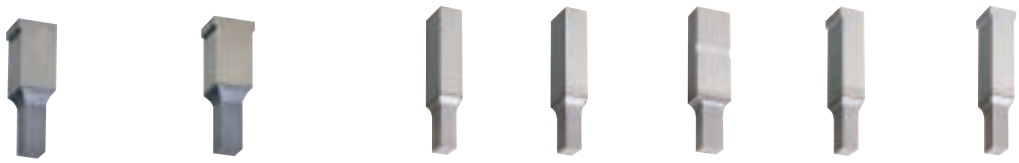
BLOCK PUNCHES

Product name Catalog No.	BLOCK PUNCHES	BLOCK PUNCHES —TAPPED—	JECTOR BLOCK PUNCHES —TAPPED—	BLOCK PUNCHES —WITH KEY GROOVE—	JECTOR BLOCK PUNCHES —WITH KEY GROOVE—
Page	305	307	309	311	313

BLOCK PUNCHES —SINGLE FLANGE TYPE—	JECTOR BLOCK PUNCHES —SINGLE FLANGE TYPE—	BLOCK PUNCHES —DOUBLE FLANGES TYPE—	JECTOR BLOCK PUNCHES —DOUBLE FLANGES TYPE—	BLOCK PUNCHES (FOR HEAVY LOAD) —FLANGE THICKNESS 10 MM, SINGLE FLANGE TYPE—	BLOCK PUNCHES (FOR HEAVY LOAD) —FLANGE THICKNESS 10 MM, DOUBLE FLANGES TYPE—
315	317	319	321	323	325

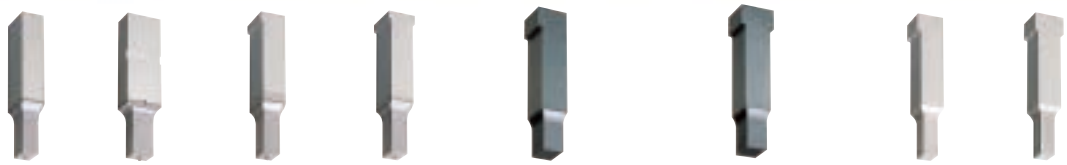
BLOCK PUNCHES —FLANGE STOPPER TYPE—	BLOCK PUNCHES, —CONFIGURABLE SIZE TYPE—				
	—NORMAL—	—TAPPED—	—WITH KEY GROOVE—	—SINGLE FLANGE TYPE—	—DOUBLE FLANGES TYPE—
327	329				

BLOCK PUNCHES —WPC® TREATMENT—					BLOCK PUNCHES —TiCN COATING—		
—NORMAL—	—TAPPED—	—WITH KEY GROOVE—	—SINGLE FLANGE TYPE—	—DOUBLE FLANGES TYPE—	—NORMAL—	—TAPPED—	—WITH KEY GROOVE—
331					333		



BLOCK PUNCHES —TiCN COATING—		BLOCK PUNCHES —HW COATING—				
—SINGLE FLANGE TYPE—	—DOUBLE FLANGES TYPE—	—NORMAL—	—TAPPED—	—WITH KEY GROOVE—	—SINGLE FLANGE TYPE—	—DOUBLE FLANGES TYPE—
333		335				

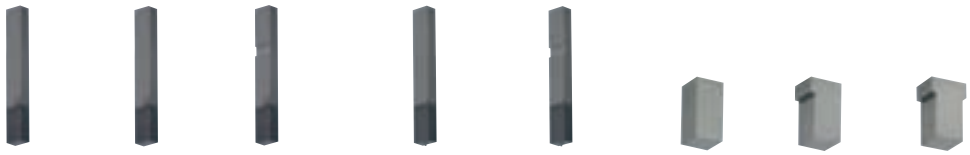
JECTOR BLOCK PUNCHES —WPC® TREATMENT—				JECTOR BLOCK PUNCHES —TiCN COATING—			
—TAPPED—	—WITH KEY GROOVE—	—SINGLE FLANGE TYPE—	—DOUBLE FLANGES TYPE—	—TAPPED—	—WITH KEY GROOVE—	—SINGLE FLANGE TYPE—	—DOUBLE FLANGES TYPE—
337				339			



JECTOR BLOCK PUNCHES —HW COATING—				BLOCK PUNCHES —TiCN coating—(FOR HEAVY LOAD)		BLOCK PUNCHES —WPC® TREATMENT—(FOR HEAVY LOAD)	
—TAPPED—	—WITH KEY GROOVE—	—SINGLE FLANGE TYPE—	—DOUBLE FLANGES TYPE—	—FLANGE THICKNESS 10 MM, SINGLE FLANGE TYPE—	—FLANGE THICKNESS 10 MM, DOUBLE FLANGES TYPE—	—FLANGE THICKNESS 10 MM, SINGLE FLANGE TYPE—	—FLANGE THICKNESS 10 MM, DOUBLE FLANGES TYPE—
341				343		345	

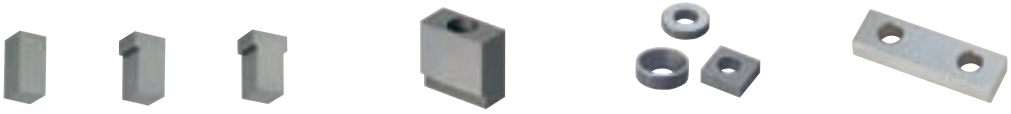
BLOCK PUNCHES —HW COATING—(FOR HEAVY LOAD)		BLOCK PUNCHES, CONFIGURABLE SIZE TYPE —TiCN COATING—			
—FLANGE THICKNESS 10 MM, SINGLE FLANGE TYPE—	—FLANGE THICKNESS 10 MM, DOUBLE FLANGES TYPE—	—NORMAL—	—TAPPED—	—WITH KEY GROOVE—	—SINGLE FLANGE TYPE—	—DOUBLE FLANGES TYPE—
345		347				

STRAIGHT PUNCHES					JECTOR STRAIGHT PUNCHES			
—STRAIGHT TYPE—	—TAPPED—	—WITH KEY GROOVE—	—SINGLE FLANGE TYPE—	—DOUBLE FLANGES TYPE—	—TAPPED—	—WITH KEY GROOVE—	—SINGLE FLANGE TYPE—	—DOUBLE FLANGES TYPE—
349					351			



STRAIGHT PUNCHES —TiCN COATING—			JECTOR STRAIGHT PUNCHES —TiCN COATING—		SHORT STRAIGHT PUNCHES		
—STRAIGHT TYPE—	—TAPPED—	—WITH KEY GROOVE—	—TAPPED—	—WITH KEY GROOVE—	—TAPPED—	—SINGLE FLANGE TYPE—	—DOUBLE FLANGES TYPE—
353			355		357		

BLOCK PUNCH BLANKS	JECTOR BLOCK PUNCH BLANKS
359	361



SHORT BLOCK PUNCH BLANKS	FLANGE HOLDERS HFW	FIXING KEYS FOR PUNCHES WITH KEY GROOVES PSK□ PSKBH	—LONG TYPE— PSKW
363	365	366	366

BLOCK PUNCHES LIST
—GUIDE 1—

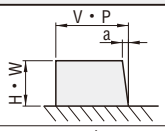
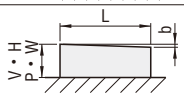
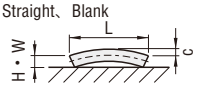
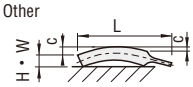
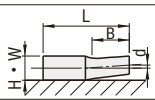
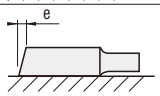
Shank type			M	Standard		TiCN coating		WPC® treatment		HW coating	
				Type	Page	Type	Page	Type	Page	Type	Page
Fixed size type	Normal		Equivalent to SKD11	HP□□	P.305		P.333	W—HP□□	P.331		P.335
			SKH51	HSP□□		H—HSP□□		W—HSP□□		HW—HSP□□	
			Powdered high-speed steel	PHP□□		H—PHP□□		W—PHP□□		HW—PHP□□	
	Tapped		Equivalent to SKD11	HM□□	P.307		P.333	W—HM□□	P.331		P.335
			SKH51	HSM□□		H—HSM□□		W—HSM□□		HW—HSM□□	
			Powdered high-speed steel	PHM□□		H—PHM□□		W—PHM□□		HW—PHM□□	
	Jector Tapped		Equivalent to SKD11	HJM□□	P.309		P.339	W—HJM□□	P.337		P.341
			SKH51	HSJM□□		H—HSJM□□		W—HSJM□□		HW—HSJM□□	
			Powdered high-speed steel	PHJM□□		H—PHJM□□		W—PHJM□□		HW—PHJM□□	
	With key groove		Equivalent to SKD11	HK□□	P.311		P.333	W—HK□□	P.331		P.335
			SKH51	HSK□□		H—HSK□□		W—HSK□□		HW—HSK□□	
			Powdered high-speed steel	PHK□□		H—PHK□□		W—PHK□□		HW—PHK□□	
	Jector With key groove		Equivalent to SKD11	HJK□□	P.313		P.339	W—HJK□□	P.337		P.341
			SKH51	HSJK□□		H—HSJK□□		W—HSJK□□		HW—HSJK□□	
			Powdered high-speed steel	PHJK□□		H—PHJK□□		W—PHJK□□		HW—PHJK□□	
	Single flange type		Equivalent to SKD11	HF□□	P.315		P.333	W—HF□□	P.331		P.335
			SKH51	HSF□□		H—HSF□□		W—HSF□□		HW—HSF□□	
			Powdered high-speed steel	PHF□□		H—PHF□□		W—PHF□□		HW—PHF□□	
	Jector Single flange		Equivalent to SKD11	HJF□□	P.317		P.339	W—HJF□□	P.337		P.341
			SKH51	HSJF□□		H—HSJF□□		W—HSJF□□		HW—HSJF□□	
			Powdered high-speed steel	PHJF□□		H—PHJF□□		W—PHJF□□		HW—PHJF□□	
	Double flanges		Equivalent to SKD11	HW□□	P.319		P.333	W—HW□□	P.331		P.335
			SKH51	HSW□□		H—HSW□□		W—HSW□□		HW—HSW□□	
			Powdered high-speed steel	PHW□□		H—PHW□□		W—PHW□□		HW—PHW□□	
	Jector Double flanges		Equivalent to SKD11	HJW□□	P.321		P.339	W—HJW□□	P.337		P.341
			SKH51	HSJW□□		H—HSJW□□		W—HSJW□□		HW—HSJW□□	
			Powdered high-speed steel	PHJW□□		H—PHJW□□		W—PHJW□□		HW—PHJW□□	
	Flange thickness 10mm type Single flange		Equivalent to SKD11	AHF□□	P.323		P.343	W—AHF□□	P.345		P.345
			SKH51	AHSF□□		H—AHSF□□		W—AHSF□□		HW—AHSF□□	
			Powdered high-speed steel	APHF□□		H—APHF□□		W—APHF□□		HW—APHF□□	
	Flange thickness 10mm type Double flanges		Equivalent to SKD11	AHW□□	P.325		P.343	W—AHW□□	P.345		P.345
			SKH51	AHSW□□		H—AHSW□□		W—AHSW□□		HW—AHSW□□	
			Powdered high-speed steel	APHW□□		H—APHW□□		W—APHW□□		HW—APHW□□	
	Flange stopper type		Equivalent to SKD11	HT□□	P.327						
			SKH51	HST□□							
			Powdered high-speed steel	PHT□□							
Configurable size type	Normal		Equivalent to SKD11	FHP□	P.329		P.347				
			SKH51	FHSP□		H—FHSP□					
			Powdered high-speed steel	FPHP□		H—FPHP□					
	Tapped		Equivalent to SKD11	FHM□	P.329		P.347				
			SKH51	FHSM□		H—FHSM□					
			Powdered high-speed steel	FPHM□		H—FPHM□					
	With key groove		Equivalent to SKD11	FHK□	P.329		P.347				
			SKH51	FHSK□		H—FHSK□					
			Powdered high-speed steel	FPHK□		H—FPHK□					
	Single flange type		Equivalent to SKD11	FHF□	P.329		P.347				
			SKH51	FHSF□		H—FHSF□					
			Powdered high-speed steel	FPHF□		H—FPHF□					
	Double flanges		Equivalent to SKD11	FHW□	P.329		P.347				
			SKH51	FHSW□		H—FHSW□					
			Powdered high-speed steel	FPHW□		H—FPHW□					
Straight type	Straight type		Equivalent to SKD11	HPC□	P.329		P.353				
			SKH51	HSPC□		H—HSPC□					
			Powdered high-speed steel	PHPC□		H—PHPC□					
	Straight Tapped		Equivalent to SKD11	HMC□	P.329		P.353				
			SKH51	HSMC□		H—HSMC□					
			Powdered high-speed steel	PHMC□		H—PHMC□					
	Jector straight Tapped		Equivalent to SKD11	HJMC□	P.351		P.355				
			SKH51	HSJMC□		H—HSJMC□					
			Powdered high-speed steel	PHJMC□		H—PHJMC□					
	Straight With key groove		Equivalent to SKD11	HKC□	P.329		P.353				
			SKH51	HSKC□		H—HSKC□					
			Powdered high-speed steel	PHKC□		H—PHKC□					
	Jector straight With key groove		Equivalent to SKD11	HJKC□	P.351		P.355				
			SKH51	HSJKC□		H—HSJKC□					
			Powdered high-speed steel	PHJKC□		H—PHJKC□					

Shank type			M	Standard		TiCN coating		WPC® treatment		HW coating	
				Type	Page	Type	Page	Type	Page	Type	Page
Straight type	Straight Single flange		Equivalent to SKD11	HFC□	P.349						
			SKH51	HSFC□							
			Powdered high-speed steel	PHFC□							
	Jector straight Single flange		Equivalent to SKD11	HJFC□	P.351						
			SKH51	HSJFC□							
			Powdered high-speed steel	PHJFC□							
	Straight Double flanges		Equivalent to SKD11	HWC□	P.349						
			SKH51	HSWC□							
			Powdered high-speed steel	PHWC□							
	Jector straight Double flanges		Equivalent to SKD11	HJWC□	P.351						
			SKH51	HSJWC□							
			Powdered high-speed steel	PHJWC□							
	Short straight Tapped		Equivalent to SKD11	HMCDS	P.357						
			Powdered high-speed steel	PHMCDS							
	Short straight Single flange		Equivalent to SKD11	HFCDS	P.357						
			Powdered high-speed steel	PHFCDS							
	Short straight Double flanges		Equivalent to SKD11	HWCDS	P.357						
			Powdered high-speed steel	PHWCDS							
Punch blanks	Normal		Equivalent to SKD11	HPB (H6～30)	P.359						
			SKH51	HPB (H3～5)							
			Powdered high-speed steel	PHPB							
	Tapped		Equivalent to SKD11	HMB (H6～30)	P.359						
			SKH51	HMB (H5)							
			Powdered high-speed steel	PHMB							
	Jector Tapped		Equivalent to SKD11	HJMB	P.361						
	With key groove		Equivalent to SKD11	HKB (H6～30)	P.359						
			SKH51	HKB (H3～5)							
			Powdered high-speed steel	PHKB							
	Jector With key groove		Equivalent to SKD11	HJKB	P.361						
	Single flange type		Equivalent to SKD11	HFB (H6～30)	P.359						
			SKH51	HFB (H3～5)							
			Powdered high-speed steel	PHFB							
	Jector Single flange		Equivalent to SKD11	HJFB	P.361						
	Double flanges		Equivalent to SKD11	HWB (H6～30)	P.359						
			SKH51	HWB (H3～5)							
			Powdered high-speed steel	PHWB							
	Jector Double flanges		Equivalent to SKD11	HJWB	P.361						
	Short Tapped		Equivalent to SKD11	HMBS	P.363						
			Powdered high-speed steel	PHMBS							
	Short Single flange		Equivalent to SKD11	HFBS	P.363						
			Powdered high-speed steel	PHFBS							
	Short Double flanges		Equivalent to SKD11	HWBS	P.363						
			Powdered high-speed steel	PHWBS							

■Improved shape precision of block punches

The shape precision standards for block bunches were modified in 2007 in order to meet the needs of higher precision dies.In addition, several types of shape tolerance standards are available to suit different customer applications.（These are selected by alterations.）

1）Shape precision standards

Item		Standard
Perpendicularity		a≦0.005
Parallelism		b≦0.005
Warpage	Straight、Blank  Other 	c≦0.005
Bending of tip		d≦0.01
Perpendicularity of top face		e≦0.005

2）Variations of shape tolerances（alterations）

Code	None	VKC	VKM	VHM	VHZ
Shape tolerance	$V\cdot H^{+0.01}_{0}$	$V\cdot H^{-0.005}_{0}$	$V\cdot H^{0}_{-0.005}$	$V\cdot H^{0}_{-0.01}$	V・H±0.005
Price/piece	0	300	300	200	100

Applicable products: All block punches（except for straight punches and punch blanks）

■Jector punch spring change（AlterationJVC）

Spring reinforced jector punches have been added to the block punch product lineup.
The spring constant is twice that of a conventional jector punch, providing improved scrap removal effects.

Applicable products: All jector punches
- ❢ Can be used with L≧60.
- ⊗ Cannot be used for H6（With a jector straight punch, cannot be used for W≦6.00.）

How to order

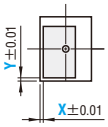
■The tip position can be set freely within the range of shank V and H.

(1) If tip is at center of shank

Catalog No.	V	H	—	L	—	P·W·R
HMDS	20	10	—	60	—	P16.00 — W8.00

(2) If tip is not at center of shank

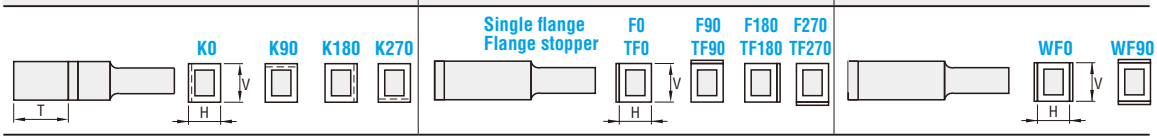
Specify X and Y.0.01mm increments Tolerance ±0.01 X and Y must either be set to 0, or else to 0.02 or more.



Catalog No.	V	H	—	L	—	P·W·R·X·Y
HMDL	20	10	—	60	—	P16.00 — W8.00 — X0.10 — Y0.10

■Key groove position and flange position can be set freely. (For types with flange thickness of 10mm, the positions are fixed.)

With key groove	Single flange·flange stopper	Double flanges



By default, the key groove, head, and flange are located at the standard positions (0). The positions can be changed at no charge.

Catalog No.	V	H	—	L	—	P.W.R	—	WF
HWES	13	10	—	70	—	P10.0 — W7.3	—	WF90

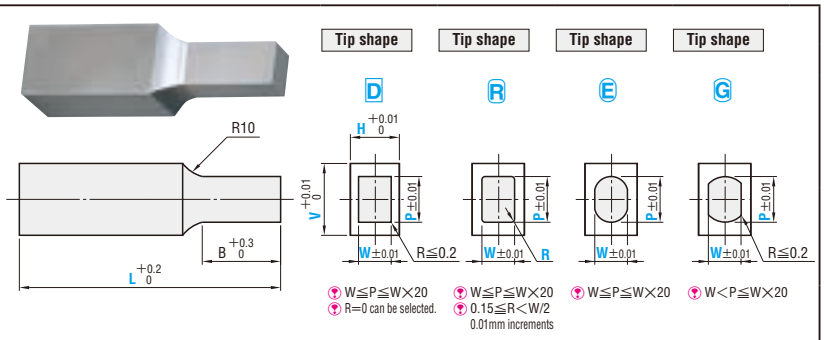
■Corner radius of square shape D type

By default, the corners are rounded to 0.2 or less.
If R0 is needed, specify R=0.
⊗ R=0 cannot be selected with WPC treatment or HW coating types.

Catalog No.	V	H	—	L	—	P.W
HPDS	10	08	—	60	—	P8.00 — W6.5 — R0

■Example of selection specifications on the product pages

M H	Catalog No. Type	Tip shape	B Tip length
(H3～5) SKH51 61～64HRC (H6～30) Equivalent to SKD11 60～63HRC	HP	D R E G	S L
SKH51 61～64HRC	HSP (H6～30)		
Powdered high-speed steel 64～67HRC	PHP		Tip length (B) L>S



(**Example**)

①Select powdered high-speed steel. ⇨ Type PHP

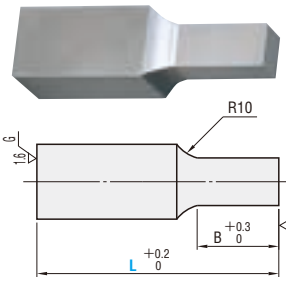
②Select tip shape D. ⇨ Tip shape D

③Select tip length S (short). ⇨ Tip length S

※The catalog No. is PHPDS.

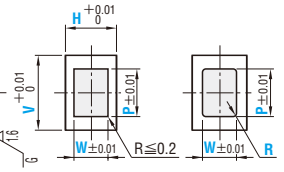
BLOCK PUNCHES

M / H	Catalog No. Type	Tip shape	B Tip length
(H3 ~ 5) SKH51 61 ~ 64HRC (H6 ~ 30) Equivalent to SKD11 60 ~ 63HRC	HP	D R E G	S / L
SKH51 61 ~ 64HRC	HSP (H6 ~ 30)		
Powdered high-speed steel 64 ~ 67HRC	PHP		Tip length (B) L>S



RoHS

Tip shape D

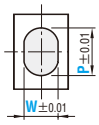


W≦P≦W×20
R=0 can be selected.

Tip shape R

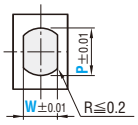
W≦P≦W×20
0.15≦R<W/2
0.01mm increments

Tip shape E



W≦P≦W×20

Tip shape G



W<P≦W×20

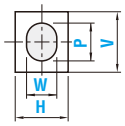
Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

Catalog No. Type	Tip shape	B Tip length	H \ V (Pmin. / Wmin.)	3 / 1.5	4 / 2.0	5 / 2.5	6 / 3.0	8 / 3.0	10 / 4.0	13 / 5.0	16 / 7.0	20 / 8.0	22 / 9.0	25 / 10.0	28 / 12.0	30 / 12.0	(40) / 16.0	(50) / 20.0	L	B S	B L
HP HSP (H6 ~ 30) PHP	D R E G	S L	(3) 1.0	○	○	○	○	○	○	○	○	○	○						(40) (50) 60 70 80 90 100	6	8
			(4) 1.0		○	○	○	○	○	○	○	○	○								
			5 1.2			○	○	○	○	○	○	○	○	○	○	○				8	13
			6 1.5				○	○	○	○	○	○	○	○	○	○					
			8 2.0					○	○	○	○	○	○	○	○	○	○				
			10 2.5						○	○	○	○	○	○	○	○	○	○		13	19
			13 3.0							○	○	○	○	○	○	○	○	○			
			16 4.0								○	○	○	○	○	○	○	○		19	25
			20 5.0									○	○	○	○	○	○	○			
			22 6.0										○	○	○	○	○	○			
			25 6.5											○	○	○	○	○			
			28 7.0												○	○	○	○			
			30 7.5													○	○	○			

L(40)・H10 ~ 30・B=13 If full length is (40) and H dimension is 10 ~ 30, tip length is 13mm in all cases.
L(50)・H16 ~ 30・B=19 If full length is (50) and H dimension is 16 ~ 30, tip length is 19mm in all cases.
If H is (3) or (4), full length L is 40 ~ 80 for HP types or 40 ~ 70 for PHP types.
V(40) and (50) are specifications available for HP types only.

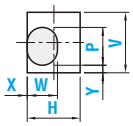
Order

(1) If tip is at center of shank



Catalog No.	V	H	L	0.01mm increments		
				P	W	R (Ⓡ only)
PHPES	08	06	60	P7.62	W3.81	

(2) If tip is not at center of shank



Catalog No.	V	H	L	0.01mm increments			
				P	W	R (Ⓡ only)	X—Y
PHPES	20	10	60	P14.05	W6.05		X0.00 — Y0.50

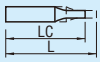
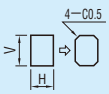
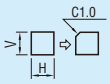
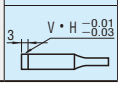
X and Y must be set either to 0 or to 0.02 or more. Tolerance±0.01

Days to Ship Quotation

Alterations

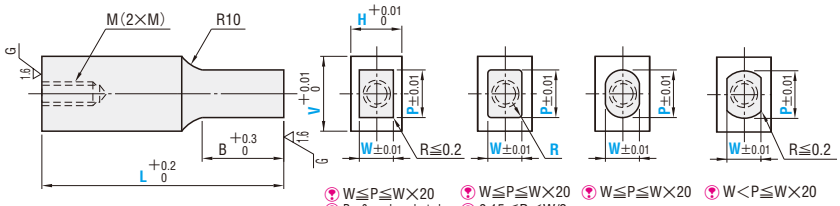
Catalog No. V H — L(LC) — P(PC)—W(WC)—R—X—Y — (BC·PKC, etc.)
PHPES 20 10 — LC65.5 — P16.00 — W8.00 — BC15.5 — VHZ

Price **Quotation**

Alteration		Code	Spec.	1Code
Alterations to tip		PC WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments W (WC) / Bmax.: 0.50 ~ 0.99 / 4; 1.00 ~ 1.19 / 8; 1.20 ~ 1.99 / 13; 2.00 ~ 2.99 / 20; 3.00 ~ 4.99 / 30; 5.00 ~ / 35	
		BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Full length (L) must be at least 30mm longer than tip length (BC).	
		SC	Lapping of tip W≧2.00 P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip D corner.	
		PKC	Tip tolerance change P·W±0.01 ⇨ $^{+0.01}_{0}$	
		PKV	Tip tolerance change P·W±0.01 ⇨ ±0.005	
Alterations to full length		LC	Full length change 30+B (BC) ≦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).	Quotation
		LKC	Full length tolerance change $L^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	
		LKZ	Full length tolerance change $L^{+0.2}_{0}$ ⇨ $^{+0.01}_{0}$	
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. Min. 0.5mm	
		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≧1.3 Tip corner ■Selection of chamfering position CCP0 CCP90 CCP180 CCP270	
		VKC	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
		VKM	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
		VHM	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
		VHZ	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ ±0.005	
		DC	Addition of press-in lead Press-in lead of 3mm (V·H $^{-0.01}_{-0.03}$) is added.	

BLOCK PUNCHES
—TAPPED—

M H	Catalog No. Type	Tip shape	B Tip length
(H5) SKH51 61～64HRC (H6～30) Equivalent to SKD11 60～63HRC	HM	D R E G	S L
SKH51 61～64HRC	HSM (H6～30)		
Powdered high-speed steel 64～67HRC	PHM		Tip length (B) L>S



RoHS

W≦P≦W×20
R=0 can be selected.

W≦P≦W×20
0.15≦R<W/2
0.01mm increments

W≦P≦W×20

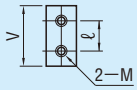
W<P≦W×20

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

Catalog No. Type	Tip shape	B Tip length	H	V / Pmin. / Wmin.	5 / 2.5	6 / 3.0	8 / 3.0	10 / 4.0	13 / 5.0	16 / 7.0	20 / 8.0	22 / 9.0	25 / 10.0	28 / 12.0	30 / 12.0	(40) / 16.0	(50) / 20.0	L	B S	B L	M
HM HSM (H6～30) PHM	D R E G	S	5	1.2	○	○	○	○	○	○	○	○	○	○	○			(40) (50) 60 70 80 90 100	8	13	3
			6	1.5		○	○	○	○	○	○	○	○	○	○						4
			8	2.0			○	○	○	○	○	○	○	○	○	○					5
			10	2.5				○	○	○	○	○	○	○	○	○	○		13	19	6
			13	3.0					○	○	○	○	○	○	○	○	○				8
			16	4.0						○	○	○	○	○	○	○	○		19	25	
			20	5.0							○	○	○	○	○	○	○				
		L	22	6.0								○	○	○	○	○	○				
			25	6.5									○	○	○	○	○				
			28	7.0										○	○	○	○				
			30	7.5											○	○	○				

L(40)・H10 ～ 30…B=10 If full length is (40) and H dimension is 10～30, tip length is 10mm in all cases.

L(50)・H16 ～ 30…B=19 If full length is (50) and H dimension is 16～30, tip length is 19mm in all cases.



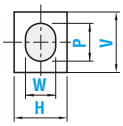
V40…2—M・ℓ=20 If V is 40, two taps are provided at a pitch of 20mm.

V50…2—M・ℓ=24 If V is 50, two taps are provided at a pitch of 24mm.

V (40) and (50) are specifications available for HM types only.

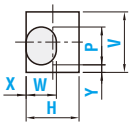
Order

(1) If tip is at center of shank



Catalog No.	V	H	—	L	—	0.01mm increments			
						P	—	W	— R (R only)
HMES	08	06	—	60	—	P5.00	—	W2.50	

(2) If tip is not at center of shank



Catalog No.	V	H	—	L	—	0.01mm increments					
						P	—	W	— R (R only)	—	X—Y
HMEL	08	06	—	60	—	P5.00	—	W2.50		—	X0.00—Y0.50

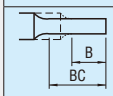
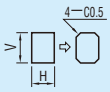
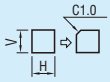
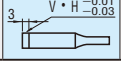
X and Y must be set either to 0 or to 0.02 or more. Tolerance±0.01

Days to Ship Quotation

Alterations

Catalog No. V H – L(LC) – P(PC) – W(WC) – R – (BC·PKC, etc.)
HMES 20 10 – LC65.5 – P16.00-W8.00 – BC15.5

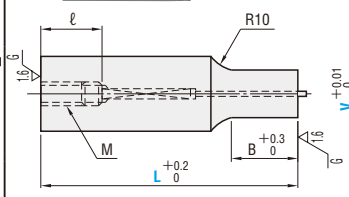
Price **Quotation**

	Alteration	Code	Spec.	1Code
Alterations to tip		PC WC	Tip dimension change PC≧V×0.3≧1.50 WC≧H×0.15≧0.75 0.01mm increments W(WC) / Bmax.: 0.75～0.99 / 4; 1.00～1.19 / 8; 1.20～1.99 / 13; 2.00～2.99 / 20; 3.00～4.99 / 30; 5.00～ / 35	
		BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Full length (L) must be at least 30mm longer than tip length (BC).	
		SC	Lapping of tip W≧2.00 P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip D corner.	
		PKC	Tip tolerance change P·W±0.01 ⇨ $^{+0.01}_{0}$	
		PKV	Tip tolerance change P·W±0.01 ⇨ ±0.005	
Alterations to full length		LC	Full length change 30+B(BC)≦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 $^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	
		LKZ	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.01}_{0}$	
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. Min. 0.5mm	Quotation
		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≧1.3 Tip corner ■Selection of chamfering position CCP0 CCP90 CCP180 CCP270	
		VKC	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
		VKM	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
		VHM	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
		VHZ	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ ±0.005	
		MC (MMC)	Tap diameter change □Equivalent to SKD11 H \ V: 6 / 8 / 10 / 13 / 16 / 20 / 22 / 25 / 28·30 6: M4→M3 — — 8: — M5→M4 — 10: — — (M6→M4 / M6→M5) M6→M5 13: — — — (M8→M5 / M8→M6) M8→M6 For change from M6 to M4 / For change from M8 to M5 } Select MMC □SKH51·powdered high-speed steel H \ V: 6 / 8 / 10 / 13 / 16 / 20 / 22 6: M4→M3 — 8: — M5→M4 10: — — M6→M5 13: — — — M8→M6	
		DC	Addition of press-in lead Press-in lead of 3mm (V·H $^{-0.01}_{-0.03}$) is added.	

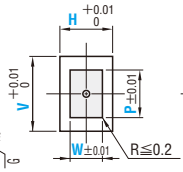
JECTOR BLOCK PUNCHES
—TAPPED—

M H	Catalog No. Type	Tip shape	B Tip length
Equivalent to SKD11 60 ~ 63HRC	HJM	D R E G	S L
SKH51 61 ~ 64HRC	HSJM		
Powdered high-speed steel 64 ~ 67HRC	PHJM		Tip length (B) L>S

RoHS

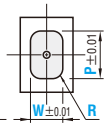


Tip shape D



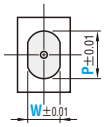
W≦P
R=0 can be selected.

Tip shape R



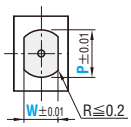
W≦P
0.15≦R<W/2
0.01mm increments

Tip shape E



W≦P

Tip shape G



W<P≦W×20

Details of jector hole P.361

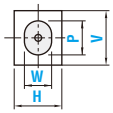
Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

Catalog No. Type	Tip shape	B Tip length	H	Pmin. / Wmin. \ V	6	8	10	13	16	20	22	25	28	30	L	B S	B L	M	ℓ
					3.0	3.0	4.0	5.0	7.0	8.0	9.0	10.0	12.0	12.0					
HJM HSJM PHJM	D R E G	S	6	2.0	○	○	○	○	○	○	○	○	○	○	(40)	8	13	4	12
			8	2.5		○	○	○	○	○	○	○	○	○				5	
			10	3.0			○	○	○	○	○	○	○	○	(50)	13	19	6	
			13	4.0				○	○	○	○	○	○	○	60			8	
		L	16	5.0					○	○	○	○	○	○	70	19	25		
			20	6.0						○	○	○	○	○					
			22	6.0							○	○	○	○	80				
			25	6.0								○	○	○					

L(40) ···› B=6 If full length is (40), tip length is 6mm in all cases.
L(50)・H10 ~ 25 ···› B=13 If full length is (50) and H dimension is 10 ~ 25, tip length is 13mm in all cases.

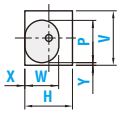
Order

(1) If tip is at center of shank



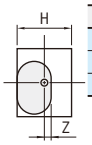
Catalog No.	V	H	—	L	—	0.01mm increments			
						P	—	W	— R (Ⓡ only)
HJMES	08	06	—	60	—	P8.00	—	W5.00	

(2) If tip is not at center of shank



Catalog No.	V	H	—	L	—	0.01mm increments					
						P	—	W	— R (Ⓡ only)	—	X—Y
HJMEL	20	16	—	60	—	P14.00	—	W10.00		—	X0.00 — Y2.50

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



H	Zmin.
6・8	1.0
10・13	1.5
16 ~ 25	2.0

When the tip position is changed, the jector hole must be located at least Zmin. away from the tip edges.
The jector hole position cannot be changed.

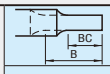
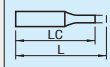
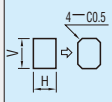
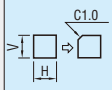
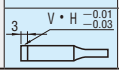
Days to Ship **Quotation**

Alterations

Catalog No. | V | H | L(LC) | P–W–R–X–Y | (BC・PKC, etc.)

HJMES 10 10 – 59.5 – P8.00 – W7.80 – BC10.5 – VKM

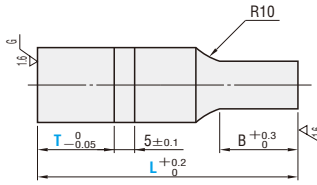
Price **Quotation**

	Alteration	Code	Spec.	1Code
Alterations to tip		BC	Tip length change (shorter than standard) 2≦BC＜B 0.1mm increments	
		SC	Lapping of tip W≧2.00 P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip corner.	
		PKC	Tip tolerance change P・W±0.01 ⇨ $^{+0.01}_{0}$	
		PKV	Tip tolerance change P・W±0.01 ⇨ ±0.005	
Alterations to full length		LC	Full length change LC＜L 0.1mm increments (If combined with LKC・LKZ, 0.01mm increments can be selected.) Tip length B is shortened by (L−LC).	
		LKC	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	
		LKZ	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.01}_{0}$	
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. Min. 0.5mm	Quotation
		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≧1.3 Tip corner ■Selection of chamfering position CCP0 CCP90 CCP180 CCP270	
		JVC	Change of spring to reinforced type 8≦H≦25···Can be used for L≧60. Cannot be used for H6.	
		AC	AIR The jector pin is removed to create an air path and the side vent hole is plugged from the inside by inserting a resin (ABS) ring.	
		NC	The jector pin is removed. Cannot be combined with AC.	
		VKC	Shank tolerance change V・H $^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
		VKM	Shank tolerance change V・H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
		VHM	Shank tolerance change V・H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
		VHZ	Shank tolerance change V・H $^{+0.01}_{0}$ ⇨ ±0.005	
		DC	Addition of press-in lead Press-in lead of 3mm (V・H $^{-0.01}_{-0.03}$) is added.	

BLOCK PUNCHES
—WITH KEY GROOVE—

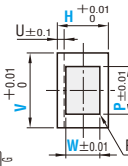
M H	Catalog No. Type	Tip shape	B Tip length
(H3～5) SKH51 61～64HRC (H6～30) Equivalent to SKD11 60～63HRC	HK	D R E G	S
SKH51 61～64HRC	HSK (H6～30)	D R E G	L
Powdered high-speed steel 64～67HRC	PHK	D R E G	Tip length (B) L>S

RoHS



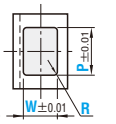
Details of key groove

Tip shape D



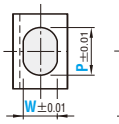
W≦P≦W×20
R=0 can be selected.

Tip shape R



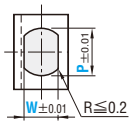
W≦P≦W×20
0.15≦R<W/2

Tip shape E



W≦P≦W×20
0.01mm increments

Tip shape G



W<P≦W×20

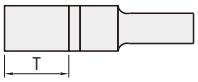
Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

Catalog No. Type	Tip shape	B Tip length	H	V (Pmin.) / Wmin.	3 / 1.5	4 / 2.0	5 / 2.5	6 / 3.0	8 / 3.0	10 / 4.0	13 / 5.0	16 / 7.0	20 / 8.0	22 / 9.0	25 / 10.0	28 / 12.0	30 / 12.0	(40) / 16.0	(50) / 20.0	L	0.1mm T	B S	B L	U
HK HSK (H6～30) PHK	D R E G	S L	(3)	1.0	○	○	○	○	○	○	○	○	○	○						(40) (50) 60 70 80 90 100	T≧2	6	8	1.0
			(4)	1.0		○	○	○	○	○	○	○	○	○										
			5	1.2			○	○	○	○	○	○	○	○	○	○	○					8	13	
			6	1.5				○	○	○	○	○	○	○	○	○	○							
			8	2.0					○	○	○	○	○	○	○	○	○	○						1.5
			10	2.5						○	○	○	○	○	○	○	○	○	○			13	19	
			13	3.0							○	○	○	○	○	○	○	○	○					
			16	4.0								○	○	○	○	○	○	○	○			19	25	
			20	5.0									○	○	○	○	○	○	○					
			22	6.0										○	○	○	○	○	○					
			25	6.5											○	○	○	○	○					
			28	7.0												○	○	○	○					
			30	7.5													○	○	○					

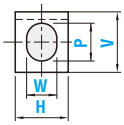
L(40)・H10～30 ⇢ B=13 If full length is (40) and H dimension is 10～30, tip length is 13mm in all cases.
L(50)・H16～30 ⇢ B=19 If full length is (50) and H dimension is 16～30, tip length is 19mm in all cases.
H(3) (4) ⇢ L40～70 If H dimension is (3) or (4), full length L is within a range of 40～70.
V(40) and (50) are specifications available for HK types only.

Order

■Key groove position: K specification

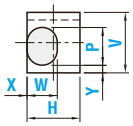


(1) If tip is at center of shank



Catalog No.	V	H	L	0.01mm increments P	W	R (Ⓡ only)	0.1mm increments T≧2	K
PHKES	08	06	60	P7.00	W5.20		T20.5	K90

(2) If tip is not at center of shank



Catalog No.	V	H	L	0.01mm increments P	W	R (Ⓡ only)	0.1mm increments T≧2	K	0.01mm increments X—Y
PHKEL	20	10	70	P16.00	W8.00		T20.5	K90	X0.00—Y0.50

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

Days to Ship Quotation

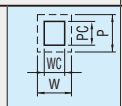
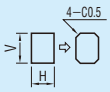
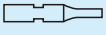
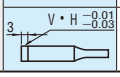
■Fixing keys for punches with key grooves P.366

Alterations

Catalog No. | V | H – L(LC) – P(PC) – W(WC) – R – T — K – X – Y – (BC・PKC, etc.)

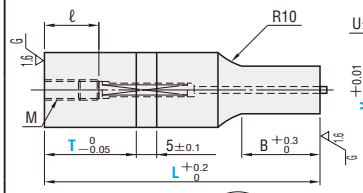
HKES 20 10 – LC65.5 – P16.00 – W8.00 – T20.5-K90 – BC15.5

Price **Quotation**

	Alteration	Code	Spec.	1Code
Alterations to tip		PC WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments W(WC) / Bmax. 0.50 ~ 0.99 / 4 1.00 ~ 1.19 / 8 1.20 ~ 1.99 / 13 2.00 ~ 2.99 / 20 3.00 ~ 4.99 / 30 5.00 ~ / 35	
		BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Full length (L) must be at least 30mm longer than tip length (BC).	
		SC	Lapping of tip W≧2.00 P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip D corner.	
		PKC	Tip tolerance change P・W±0.01 ⇨ $^{+0.01}_{0}$	
		PKV	Tip tolerance change P・W±0.01 ⇨ ±0.005	
Alterations to full length		LC	Full length change 30+B(BC)≦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 $^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	Quotation
		LKZ	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.01}_{0}$	
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. Min. 0.5mm	
		TKC	Key groove position tolerance change T $^{0}_{-0.05}$ ⇨ $^{0}_{-0.02}$	
		RTC	Key groove position tolerance change T $^{0}_{-0.05}$ ⇨ $^{+0.05}_{0}$	
		WK	Addition of key groove at symmetrically opposite position K0・180 K90・270 H—{2×U(UK)}≧2.0(K0.K180) V—{2×U(UK)}≧2.0(K90.K270) An additional key groove is located at the position symmetrically opposite to the specified key groove. Can be combined with UK.	
		UK	Key groove depth change 0.5≦UK≦U+0.2 0.1mm increments H(V)—UK≧2.0 Can be combined with WK.	
		VKC	Shank tolerance change V・H $^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
		VKM	Shank tolerance change V・H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
		VHM	Shank tolerance change V・H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
		VHZ	Shank tolerance change V・H $^{+0.01}_{0}$ ⇨ ±0.005	
		DC	Addition of press-in lead Press-in lead of 3mm (V・H $^{-0.01}_{-0.03}$) is added.	

JECTOR BLOCK PUNCHES
—WITH KEY GROOVE—

M H	Catalog No. Type	Tip shape	B Tip length
Equivalent to SKD11 60～63HRC	HJK	D R E G	S L
SKH51 61～64HRC	HSJK		
Powdered high-speed steel 64～67HRC	PHJK		Tip length (B) L>S

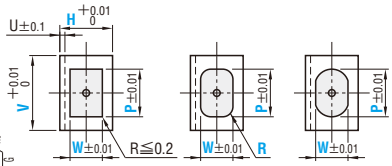


Details of key groove

Details of jector hole P.361

RoHS

Tip shape D



Tip shape R: W≦P; R=0 can be selected.

Tip shape E: W≦P; 0.15≦R<W/2, 0.01mm increments

Tip shape G: W≦P

Tip shape G: W<P≦W×20

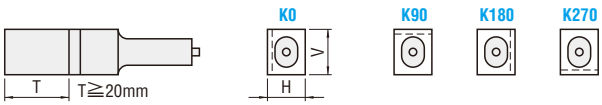
Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

Catalog No. Type	Tip shape	B Tip length	H \ V (Pmin. / Wmin.)	6 (3.0 / 3.0)	8 (3.0 / 3.0)	10 (4.0 / 5.0)	13 (5.0 / 7.0)	16 (7.0 / 8.0)	20 (8.0 / 9.0)	22 (9.0 / 10.0)	25 (10.0 / 12.0)	28 (12.0 / 12.0)	30	L	0.1mm T	B S	B L	M	ℓ	U
HJK HSJK PHJK	D R E G	S L	6 / 2.0	○	○	○	○	○	○	○	○	○	○	(40) (50) 60 70 80	T≧20	8	13	4	12	1.0
			8 / 2.5		○	○	○	○	○	○	○	○	○					5		1.5
			10 / 3.0			○	○	○	○	○	○	○	○			13	19	6		
			13 / 4.0				○	○	○	○	○	○	○					8		
			16 / 5.0					○	○	○	○	○	○			19	25			
			20 / 6.0						○	○	○	○	○							
			22 / 6.0							○	○	○	○							
			25 / 6.0								○	○	○							

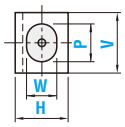
L(40) ···B=6 If full length is (40), tip length is 6mm in all cases.
L(50)・H10～25···B=10 If full length is (50) and H dimension is 10～25, tip length is 10mm in all cases.

Order

■Key groove position: K specification

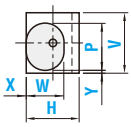


(1) If tip is at center of shank



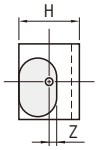
Catalog No.	V	H	L	0.01mm increments P	W	R (R only)	0.1mm increments T≧20	K
HJKES	08	06	60	P8.00	W5.20		T22.5	K0

(2) If tip is not at center of shank



Catalog No.	V	H	L	0.01mm increments P	W	R (R only)	0.1mm increments T≧20	K	0.01mm increments X—Y
HJKEL	20	16	60	P14.00	W10.00		T25.5	K180	X0.00 — Y2.50

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



H	Zmin.
6・8	1.0
10・13	1.5
16～25	2.0

When the tip position is changed, the jector hole must be located at least Zmin. away from the tip edges. The jector hole position cannot be changed.

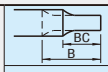
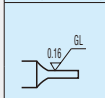
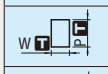
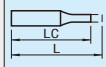
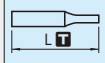
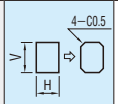
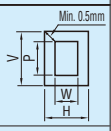
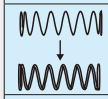
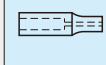
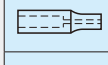
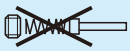
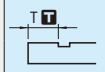
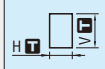
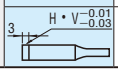
Days to Ship Quotation

Alterations

Catalog No. | V | H | L(LC) | P—W—R | T—K | X—Y | (BC·PKC, etc.)

HJKDL 20 16 – LC55.5 – P14.00 – W10.00 – T25 – K0 – BC20.5

Price **Quotation**

	Alteration	Code	Spec.	1Code
Alterations to tip		BC	Tip length change (shorter than standard) 2≦BC<B 0.1mm increments	
		SC	Lapping of tip W≧2.00 P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip D corner.	
		PKC	Tip tolerance change P·W±0.01 ⇨ $^{+0.01}_{0}$	
		PKV	Tip tolerance change P·W±0.01⇨±0.005	
Alterations to full length		LC	Full length change LC<L 0.1mm increments (If combined with LKC·LKZ, 0.01mm increments can be selected.) Tip length B is shortened by (L—LC).	
		LKC	Full length tolerance change L$^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	
		LKZ	Full length tolerance change L$^{+0.2}_{0}$ ⇨ $^{+0.01}_{0}$	
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. 	Quotation
		JVC	Change of spring to reinforced type 8≦H≦25···Can be used with L≧60. Cannot be used for H6.	
		AC	The jector pin is removed to create an air path and the side vent hole is plugged from the inside by inserting a resin (ABS) ring.	
		NC	 The jector pin is removed. Cannot be combined with AC.	
		TKC	Key groove position tolerance change T$^{0}_{-0.05}$ ⇨ $^{0}_{-0.02}$	
		RTC	Key groove position tolerance change T$^{0}_{-0.05}$ ⇨ $^{+0.05}_{0}$	
		UK	Key groove depth change 0.5≦UK≦U+0.2 0.1mm increments Can be used for H≧10 (K0, K180) V≧10	
		VKC	Shank tolerance change V·H$^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
		VKM	Shank tolerance change V·H$^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
		VHM	Shank tolerance change V·H$^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
		VHZ	Shank tolerance change V·H$^{+0.01}_{0}$ ⇨ ±0.005	
		DC	Addition of press-in lead Press-in lead of 3mm (V·H $^{-0.01}_{-0.03}$) is added.	

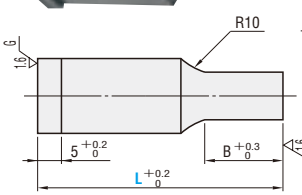
■Fixing keys for punches with key grooves P.366

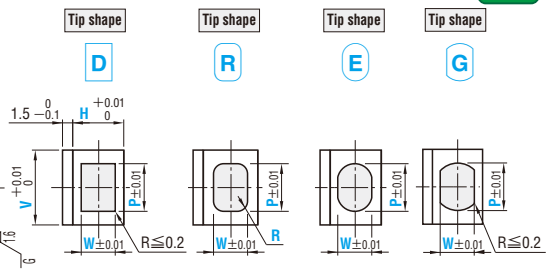
PSKB PSKBH PSKS PSKJ PSK PSKP PSKH PSKW

BLOCK PUNCHES
—SINGLE FLANGE—

M H	Catalog No. Type	Tip shape	B Tip length
(H2 ~ 5) SKH51 61 ~ 64HRC (H6 ~ 30) Equivalent to SKD11 60 ~ 63HRC	HF	D R E G	S L
SKH51 61 ~ 64HRC	HSF (H6 ~ 30)		
Powdered high-speed steel 64 ~ 67HRC	PHF		Tip length (B) L>S

RoHS





W≦P≦W×20
R=0 can be selected.

W≦P≦W×20
0.15≦R<W/2
0.01mm increments

W≦P≦W×20

W<P≦W×20

Details of flange

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

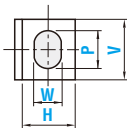
Catalog No. Type	Tip shape	B Tip length	H \ V (P min. / W min.)	2 / 1.0	3 / 1.5	4 / 2.0	5 / 2.5	6 / 3.0	8 / 3.0	10 / 4.0	13 / 5.0	16 / 7.0	20 / 8.0	22 / 9.0	25 / 10.0	28 / 12.0	30 / 12.0	(40) / 16.0	(50) / 20.0	L	B S	B L
HF HSF (H6 ~ 30) PHF	D R E G	S L	(2) 1.0	○	○	○	○	○	○	○	○									(40) (50) 60 70 80 90 100	6	8
			(3) 1.0		○	○	○	○	○	○	○	○	○	○								
			(4) 1.0			○	○	○	○	○	○	○	○	○								
			5 1.2				○	○	○	○	○	○	○	○	○	○	○				8	13
			6 1.5					○	○	○	○	○	○	○	○	○	○					
			8 2.0						○	○	○	○	○	○	○	○	○	○				
			10 2.5							○	○	○	○	○	○	○	○	○	○		13	19
			13 3.0								○	○	○	○	○	○	○	○	○			
			16 4.0									○	○	○	○	○	○	○	○		19	25
			20 5.0										○	○	○	○	○	○	○			
			22 6.0											○	○	○	○	○	○			
			25 6.5												○	○	○	○	○			
			28 7.0													○	○	○	○			
			30 7.5														○	○	○			

L(40)・H10 ~ 30···B=13 If full length is (40) and H dimension is 10 ~ 30, tip length is 13mm in all cases.
L(50)・H16 ~ 30···B=19 If full length is (50) and H dimension is 16 ~ 30, tip length is 19mm in all cases.
H(2) (3) (4) ···L40 ~ 70 If H dimension is (2), (3), or (4), full length L is within a range of 40 ~ 70.
V(40) and (50) are specifications available for HF types only.

Order

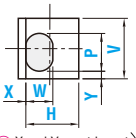
■Flange position: F specification

(1) If tip is at center of shank



Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R (R only)	—	F
PHFES	08	08	—	60	—	P6.00	—	W4.00			—	F0

(2) If tip is not at center of shank



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

Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R (R only)	—	F	—	0.01mm increments X—Y
PHFEL	10	10	—	60	—	P6.00	—	W5.00			—	F0	—	X0.00 — Y0.50

Days to Ship

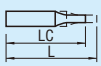
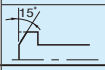
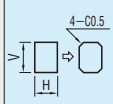
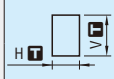
Quotation

Alterations

Catalog No. | V | H – L(LC) – P(PC) – W(WC) – R – F – X – Y – (BC・PKC, etc.)

PHFES 10 10 – LC58.5 – P8.00 – W6.00 – F90 – HC1.0

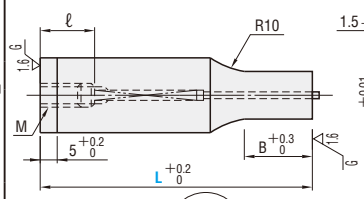
Price Quotation

Alteration		Code	Spec.	1Code
Alterations to tip		PC WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments W(WC) / Bmax.: 0.50 ~ 0.99 / 4; 1.00 ~ 1.19 / 8; 1.20 ~ 1.99 / 13; 2.00 ~ 2.99 / 20; 3.00 ~ 4.99 / 30; 5.00 ~ / 35	
		BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Full length (L) must be at least 30mm longer than tip length (BC).	
		SC	Lapping of tip W≧2.00 P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip D corner.	
		PKC	Tip tolerance change P・W±0.01 ⇨ $^{+0.01}_{0}$	
		PKV	Tip tolerance change P・W±0.01 ⇨ ±0.005	
Alterations to full length		LC	Full length change 30+B(BC)≦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 $L^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	
		LKZ	Full length tolerance change $L^{+0.2}_{0}$ ⇨ $^{+0.01}_{0}$	Quotation
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, 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 tolerance change $T^{+0.2}_{0}$ ⇨ $^{+0.02}_{0}$	
		TKM	Flange tolerance change $T^{+0.2}_{0}$ ⇨ $^{0}_{-0.02}$	
		FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
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.	
		VKC	Shank tolerance change $V・H^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
		VKM	Shank tolerance change $V・H^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
		VHM	Shank tolerance change $V・H^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
		VHZ	Shank tolerance change $V・H^{+0.01}_{0}$ ⇨ ±0.005	

JECTOR BLOCK PUNCHES
—SINGLE FLANGE—

M / H	Catalog No. Type	Tip shape	B Tip length
Equivalent to SKD11 60 ~ 63HRC	HJF	D R E G	S / L
SKH51 61 ~ 64HRC	HSJF		
Powdered high-speed steel 64 ~ 67HRC	PHJF		Tip length (B) L>S

RoHS



Tip shape D

Tip shape R

Tip shape E

Tip shape G

Details of flange

Details of jector hole P.361

W≦P
R=0 can be selected.

W≦P
0.15≦R<W/2
0.01mm increments

W≦P

W<P≦W×20

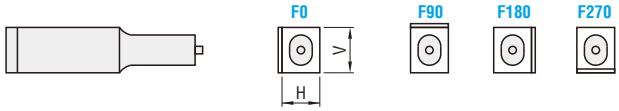
Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

Catalog No. Type	Tip shape	B Tip length	H	Pmin. / Wmin. \ V	6	8	10	13	16	20	22	25	28	30	L	B S	B L	M	ℓ
					3.0	3.0	4.0	5.0	7.0	8.0	9.0	10.0	12.0	12.0					
HJF HSJF PHJF	D R E G	S	6	2.0	○	○	○	○	○	○	○	○	○	○	(40)	8	13	4	12
			8	2.5		○	○	○	○	○	○	○	○	○	(50)			5	
			10	3.0			○	○	○	○	○	○	○	○	60	13	19	6	
			13	4.0				○	○	○	○	○	○	○	70			8	
		L	16	5.0					○	○	○	○	○	○	80	19	25		
			20	6.0						○	○	○	○	○					
			22	6.0							○	○	○	○					
			25	6.0								○	○	○					

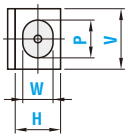
L(40) ···B=6 If full length is (40), tip length is 6mm in all cases.
L(50)・H10 ~ 25···B=13 If full length is (50) and H dimension is 10 ~ 25, tip length is 13mm in all cases.

Order

■Flange position: F specification

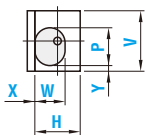


(1) If tip is at center of shank



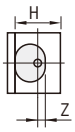
Catalog No.	V	H	L	0.01mm increments P	W	R (R only)	F
HJFES	08	06	60	P6.00	W4.00		F0

(2) If tip is not at center of shank



Catalog No.	V	H	L	0.01mm increments P	W	R (R only)	F	0.01mm increments X—Y
HJFES	13	10	60	P9.00	W7.00		F0	X0.00 — Y0.10

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



H	Zmin.
6・8	1.0
10・13	1.5
16 ~ 25	2.0

When the tip position is changed, the jector hole must be located at least Zmin. away from the tip edges.
The jector hole position cannot be changed.

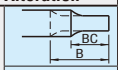
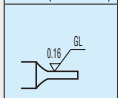
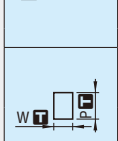
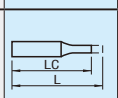
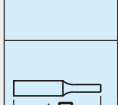
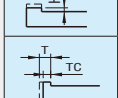
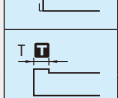
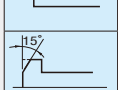
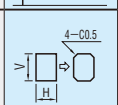
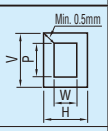
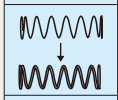
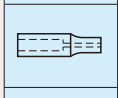
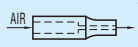
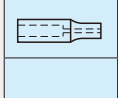
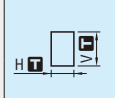
Days to Ship Quotation

Alterations

Catalog No. | V | H | L(LC) | P—W—R | F | X—Y | (BC・PKC, etc.)

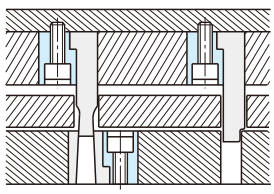
HJFES 10 10 – 60 – P8.00 – W7.80 – F0 – BC10.5

Price Quotation

	Alteration	Code	Spec.	1Code
Alterations to tip		BC	Tip length change (shorter than standard) 2≦BC＜B 0.1mm increments	
		SC	Lapping of tip W≧2.00 P dimension tolerance and increment remain the same. ⊗ R=0 cannot be selected for the tip D corner.	
		PKC	Tip tolerance change P・W±0.01 ⇨ $^{+0.01}_{0}$	
		PKV	Tip tolerance change P・W±0.01 ⇨ ±0.005	
Alterations to full length		LC	Full length change LC＜L 0.1mm increments (If combined with LKC・LKZ, 0.01mm increments can be selected.) Tip length B is shortened by (L—LC).	
		LKC	Full length tolerance change $L^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	
		LKZ	Full length tolerance change $L^{+0.2}_{0}$ ⇨ $^{+0.01}_{0}$	
Alterations to flange		HC	Flange width change 0≦HC＜1.5 0.1mm increments	
		TC	Flange thickness change 3.5≦TC＜5 0.1mm increments (If combined with TKC, 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 tolerance change $T^{+0.2}_{0}$ ⇨ $^{+0.02}_{0}$	
		TKM	Flange tolerance change $T^{+0.2}_{0}$ ⇨ $^{0}_{-0.02}$	
		FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
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. 	
		JVC	Change of spring to reinforced type 8≦H≦25···Can be used with L≧60. ⊗ Cannot be used for H6.	
		AC	 The jector pin is removed to create an air path and the side vent hole is plugged from the inside by inserting a resin (ABS) ring.	
		NC	The jector pin is removed. ⊗ Cannot be combined with AC.	
		VKC	Shank tolerance change V・H $^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
		VKM	Shank tolerance change V・H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
		VHM	Shank tolerance change V・H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
		VHZ	Shank tolerance change V・H $^{+0.01}_{0}$ ⇨ ±0.005	

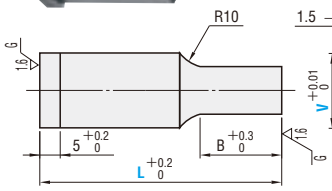
■Flange holder P.365

HFW



BLOCK PUNCHES
—DOUBLE FLANGES—

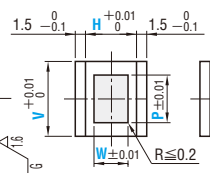
M H	Catalog No. Type	Tip shape	B Tip length
(H2～5) SKH51 61～64HRC (H6～30) Equivalent to SKD11 60～63HRC	HW	D R E G	S L
SKH51 61～64HRC	HSW (H6～30)		
Powdered high-speed steel 64～67HRC	PHW		Tip length (B) L>S



Details of flange

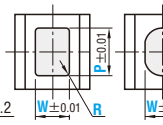
RoHS

Tip shape D



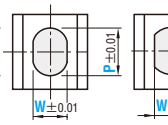
W≦P≦W×20
R=0 can be selected.

Tip shape R



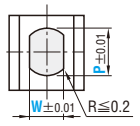
W≦P≦W×20
0.15≦R<W/2
0.01mm increments

Tip shape E



W≦P≦W×20

Tip shape G



W<P≦W×20

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

Catalog No. Type	Tip shape	B Tip length	H \ V (Pmin. / Wmin.)	2	3	4	5	6	8	10	13	16	20	22	25	28	30	(40)	(50)	L	B S	B L
				1.0	1.5	2.0	2.5	3.0	3.0	4.0	5.0	7.0	8.0	9.0	10.0	12.0	12.0	16.0	20.0			
HW HSW (H6～30) PHW	D R E G	S L	(2) 1.0	○	○	○	○	○	○	○	○									(40) (50) 60 70 80 90 100	6	8
			(3) 1.0		○	○	○	○	○	○	○	○	○	○								
			(4) 1.0			○	○	○	○	○	○	○	○	○								
			5 1.2				○	○	○	○	○	○	○	○	○	○	○				8	13
			6 1.5					○	○	○	○	○	○	○	○	○	○					
			8 2.0						○	○	○	○	○	○	○	○	○	○				
			10 2.5							○	○	○	○	○	○	○	○	○	○		13	19
			13 3.0								○	○	○	○	○	○	○	○	○			
			16 4.0									○	○	○	○	○	○	○	○		19	25
			20 5.0										○	○	○	○	○	○	○			
			22 6.0											○	○	○	○	○	○			
			25 6.5												○	○	○	○	○			
			28 7.0													○	○	○	○			
			30 7.5														○	○	○			

L (40)・H10 ～ 30 B=13 If full length is (40) and H dimension is 10～30, tip length is 13mm in all cases.
L (50)・H16 ～ 30 B=19 If full length is (50) and H dimension is 16～30, tip length is 19mm in all cases.
H (2) (3) (4) L40～70 If H dimension is (2), (3) or (4), full length L is within a range of 40～70.
V (40) and (50) are specifications available for HW types only.

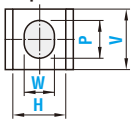
Order

■Flange position: WF specification

WF0

WF90

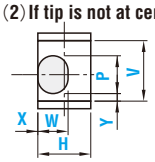
(1) If tip is at center of shank



Catalog No.	V	H	L	P	W	R (Ⓡ only)	WF
PHWES	08	08	60	P7.00	W6.00		WF0

(0.01mm increments)

(2) If tip is not at center of shank



Catalog No.	V	H	L	P	W	R (Ⓡ only)	WF	X	Y
PHWEL	10	10	60	P6.00	W5.00		WF90	X0.00	Y0.10

(0.01mm increments)

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

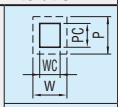
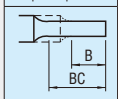
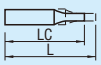
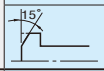
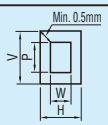
Days to Ship **Quotation**

Alterations

Catalog No.	V	H	L(LC)	P(PC)	W(WC)	R	WF	X	Y	(BC・PKC, etc.)
PHWES	10	10	LC57.5	P8.00	W6.00	WF90				TC4.0

Price

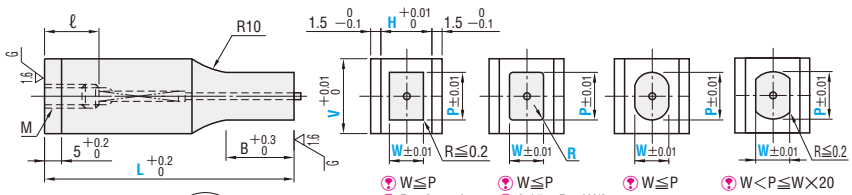
Quotation

Alteration	Code	Spec.	1Code
Alterations to tip			
	PC WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments W(WC) / Bmax. 0.50～0.99 / 4 1.00～1.19 / 8 1.20～1.99 / 13 2.00～2.99 / 20 3.00～4.99 / 30 5.00～ / 35	
	BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Full length (L) must be at least 30mm longer than tip length (BC).	
	SC	Lapping of tip W≧2.00 P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip D corner	
	PKC	Tip tolerance change P・W±0.01 ⇨ $^{+0.01}_{0}$	
	PKV	Tip tolerance change P・W±0.01 ⇨ ±0.005	
Alterations to full length			
	LC	Full length change 30+B(BC)≦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$^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	Quotation
	LKZ	Full length tolerance change L$^{+0.2}_{0}$ ⇨ $^{+0.01}_{0}$	
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, 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 tolerance change T$^{+0.2}_{0}$ ⇨ $^{+0.02}_{0}$	
	TKM	Flange tolerance change T$^{+0.2}_{0}$ ⇨ $^{0}_{-0.02}$	
	FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
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. 	
	VKC	Shank tolerance change V・H$^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
	VKM	Shank tolerance change V・H$^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
	VHM	Shank tolerance change V・H$^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
	VHZ	Shank tolerance change V・H$^{+0.01}_{0}$ ⇨ ±0.005	

JECTOR BLOCK PUNCHES
—DOUBLE FLANGES—

M H	Catalog No. Type	Tip shape	B Tip length
Equivalent to SKD11 60～63HRC	HJW	D R E G	S L
SKH51 61～64HRC	HSJW		
Powdered high-speed steel 64～67HRC	PHJW		Tip length (B) L>S

RoHS



Details of flange

Details of jector hole P.361

W≦P
R=0 can be selected.

W≦P
0.15≦R<W/2
0.01mm increments

W≦P

W<P≦W×20

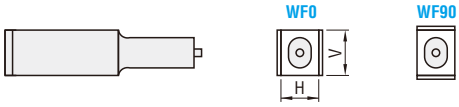
Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

Catalog No. Type	Tip shape	B Tip length	H \ V (Pmin. / Wmin.)	6 / 3.0	8 / 3.0	10 / 4.0	13 / 5.0	16 / 7.0	20 / 8.0	22 / 9.0	25 / 10.0	28 / 12.0	30 / 12.0	L	B S	B L	M	ℓ
HJW HSJW PHJW	D R E G	S	6 / 2.0	○	○	○	○	○	○	○	○	○	○	(40)	8	13	4	12
			8 / 2.5		○	○	○	○	○	○	○	○	○				5	
			10 / 3.0			○	○	○	○	○	○	○	○	(50)	13	19	6	
			13 / 4.0				○	○	○	○	○	○	○	60			8	
		L	16 / 5.0					○	○	○	○	○	○	70	19	25		
			20 / 6.0						○	○	○	○	○	80				
			22 / 6.0							○	○	○	○					
			25 / 6.0								○	○	○					

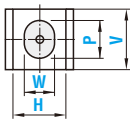
L(40) ···B=6 If full length is (40), tip length is 6mm in all cases.
L(50)・H10～25···B=13 If full length is (50) and H dimension is 10～25, tip length is 13mm in all cases.

Order

■Flange position: WF specification

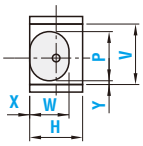


(1) If tip is at center of shank



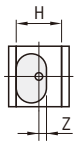
Catalog No.	V	H	L	0.01mm increments P	W	R (R only)	WF
HJWES	08	06	60	P6.00	W5.00		WF0

(2) If tip is not at center of shank



Catalog No.	V	H	L	0.01mm increments P	W	R (R only)	WF	0.01mm increments X	Y
HJWES	13	10	60	P10.00	W8.00		WF90	X0.00	Y0.10

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



H	Zmin.
6・8	1.0
10・13	1.5
16～25	2.0

When the tip position is changed, the jector hole must be located at least Zmin. away from the tip edges.
The jector hole position cannot be changed.

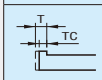
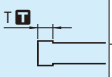
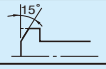
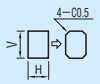
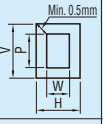
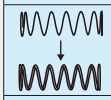
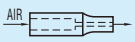
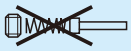
Days to Ship Quotation

Alterations

Catalog No. V H-L(LC)-P-W-R-WF-X-Y-(BC・PKC, etc.)

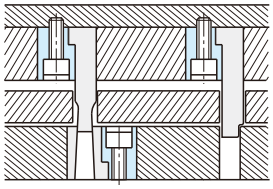
HJWES 10 10 - 60 - P8.00 - W7.80 - WF0 - BC10.5

Price **Quotation**

	Alteration	Code	Spec.	1Code
Alterations to tip		BC	Tip length change (shorter than standard) 2≦BC＜B 0.1mm increments	
		SC	Lapping of tip W≧2.00 P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip D corner.	
		PKC	Tip tolerance change P・W±0.01 ⇨ $^{+0.01}_{0}$	
		PKV	Tip tolerance change P・W±0.01 ⇨ ±0.005	
Alterations to full length		LC	Full length change LC＜L 0.1mm increments (If combined with LKC・LKZ, 0.01mm increments can be selected.) Tip length B is shortened by (L—LC).	
		LKC	Full length tolerance change $L^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	
		LKZ	Full length tolerance change $L^{+0.2}_{0}$ ⇨ $^{+0.01}_{0}$	
Alterations to flange		HC	Flange width change 0≦HC＜1.5 0.1mm increments	
		TC	Flange thickness change 3.5≦TC＜5 0.1mm increments (If combined with TKC, 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 $T^{+0.2}_{0}$ ⇨ $^{+0.02}_{0}$	
		TKM	Flange thickness tolerance change $T^{+0.2}_{0}$ ⇨ $^{0}_{-0.02}$	
		FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
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. 	
		JVC	Change of spring to reinforced type 8≦H≦25···Can be used with L≧60. Cannot be used for H6.	
		AC	 The jector pin is removed to create an air path and the side vent hole is plugged from the inside by inserting a resin (ABS) ring.	
		NC	 The jector pin is removed. Cannot be combined with AC.	
		VKC	Shank tolerance change $V・H^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
		VKM	Shank tolerance change $V・H^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
		VHM	Shank tolerance change $V・H^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
		VHZ	Shank tolerance change $V・H^{+0.01}_{0}$ ⇨ ±0.005	

■Flange holder P.365

HFW



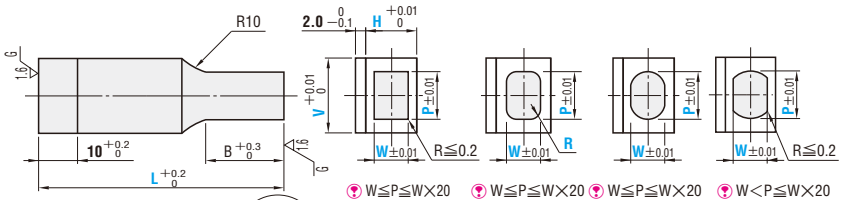
BLOCK PUNCHES (FOR HEAVY LOAD)

—FLANGE THICKNESS 10mm・SINGLE FLANGE—

M H	Catalog No. Type	Tip shape	B Tip length
(H2～5) SKH51 61～64HRC (H6～13) Equivalent to SKD11 60～63HRC	AHF	D R E G	S L
SKH51 61～64HRC	AHSF (H6～13)		
Powdered high-speed steel 64～67HRC	APHF		Tip length (B) L>S

RoHS

Tip shape D | Tip shape R | Tip shape E | Tip shape G



W≦P≦W×20
R=0 can be selected.

W≦P≦W×20
0.15≦R<W/2
0.01mm increments

W≦P≦W×20

W<P≦W×20

Details of flange. The R is larger compared to the conventional 5mm thickness flange type.

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

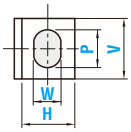
Catalog No. Type	Tip shape	B Tip length	H \ V (Pmin. / Wmin.)	3 / 1.5	4 / 2.0	5 / 2.5	6 / 3.0	8 / 3.0	10 / 4.0	13 / 5.0	16 / 7.0	20 / 8.0	22 / 9.0	25 / 10.0	28 / 12.0	30 / 12.0	L	B S	B L
AHF AHSF (H6～13) APHF	D R E G	S L	(2) 1.0	○	○	○	○	○	○	○							50 60 70 80	6	8
			(3) 1.0	○	○	○	○	○	○	○	○	○	○						
			(4) 1.0		○	○	○	○	○	○	○	○	○						
			5 1.2			○	○	○	○	○	○	○	○	○	○	○		8	13
			6 1.5				○	○	○	○	○	○	○	○	○	○			
			8 2.0					○	○	○	○	○	○	○	○	○			
			10 2.5						○	○	○	○	○	○	○	○		13	19
			13 3.0							○	○	○	○	○	○	○			

H(2)(3)(4) ··· L50～70 If H dimension is (2), (3), or (4), full length L is within a range of 50～70.

Order

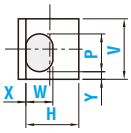
■The flange position is fixed. (F need not be specified.)

(1) If tip is at center of shank



Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R (R only)
APHFES	08	08	—	60	—	P8.00	—	W6.00		

(2) If tip is not at center of shank



Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R (R only)	—	0.01mm increments X—Y
APHFEL	10	10	—	60	—	P6.00	—	W5.00			—	X0.00 — Y0.50

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

Days to Ship **Quotation**

■Features

These block punches have greater flange strength than ordinary block punches.Use them for punching of heavy loads or high-tensile steels where punch flanges are prone to damage.

Comparison of flange dimensions Units: mm

Type	Thickness	Width	Base R
Ordinary type	5	1.5	0.3 or less
Flange thickness 10mm type	10	2.0	0.8～1.0

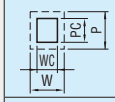
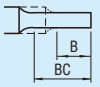
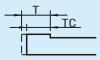
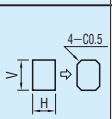
Alterations

Catalog No. V H - L(LC) - P(PC)-W(WC)-R - X—Y - (BC·PKC, etc.)

APHFES 10 10 - LC58.5 - P8.00 - W6.00 - HC1.5

Price

Quotation

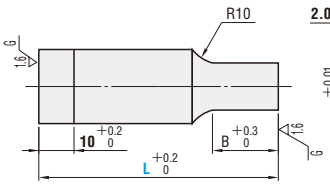
	Alteration	Code	Spec.	1Code
Alterations to tip		PC WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments W (WC) / Bmax.: 0.50～0.99 / 4; 1.00～1.19 / 8; 1.20～1.99 / 13; 2.00～2.99 / 20; 3.00～4.99 / 30; 5.00～ / 35	
		BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Full length (L) must be at least 36mm longer than tip length (BC).	
		SC	Lapping of tip W≧2.00 P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip corner.	
		PKC	Tip tolerance change P·W±0.01 ⇨ $^{+0.01}_{0}$	
		PKV	Tip tolerance change P·W±0.01 ⇨ ±0.005	
Alterations to full length		LC	Full length change 36+B(BC)≦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 36mm or less, tip length is adjusted to (Full length—36).	
		LKC	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	Quotation
		LKZ	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.01}_{0}$	
Alterations to flange		HC	Flange width change 1.0≦HC<2.0 0.1mm increments	
		TC	Flange thickness change 5≦TC<10 0.1mm increments (If combined with TKC, 0.01mm increments can be selected.) Full length L is shortened by (10—TC). If combined with LC, full length is equal to LC.	
		RE	Flange R change R=0.8 ～ 1.0⇨R≦0.3	
		FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
		TKC	Flange tolerance change T $^{+0.2}_{0}$ ⇨ $^{+0.02}_{0}$	
		TKM	Flange tolerance change T $^{+0.2}_{0}$ ⇨ $^{0}_{-0.02}$	
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. Min. 0.5mm Chamfering of the flange base R portion is not performed.	
		VKC	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
		VKM	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
		VHM	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
		VHZ	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ ±0.005	

BLOCK PUNCHES（FOR HEAVY LOAD）

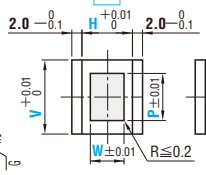
—FLANGE THICKNESS 10mm・DOUBLE FLANGES—

M H	Catalog No. Type	Tip shape	B Tip length
(H2～5) SKH51 61～64HRC (H6～13) Equivalent to SKD11 60～63HRC	AHW	D R E G	S L
SKH51 61～64HRC	AHSW (H6～13)		
Powdered high-speed steel 64～67HRC	APHW		Tip length (B) L>S

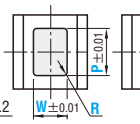
RoHS



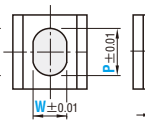
Tip shape D



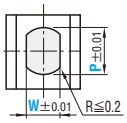
Tip shape R



Tip shape E



Tip shape G



W≦P≦W×20　W≦P≦W×20　W≦P≦W×20　W<P≦W×20

R=0 can be selected.　0.15≦R<W/2

0.01mm increments

Details of flange. The R is larger compared to the conventional 5mm thickness flange type.

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

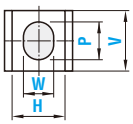
Catalog No. Type	Tip shape	B Tip length	H	W min. \ V / P min.	3 / 1.5	4 / 2.0	5 / 2.5	6 / 3.0	8 / 3.0	10 / 4.0	13 / 5.0	16 / 7.0	20 / 8.0	22 / 9.0	25 / 10.0	28 / 12.0	30 / 12.0	L	B S	B L
AHW AHSW (H6～13) APHW	D R E G	S L	(2)	1.0	○	○	○	○	○	○	○							50 60 70 80	6	8
			(3)	1.0	○	○	○	○	○	○	○	○	○	○						
			(4)	1.0		○	○	○	○	○	○	○	○	○						
			5	1.2			○	○	○	○	○	○	○	○	○	○	○		8	13
			6	1.5				○	○	○	○	○	○	○	○	○	○			
			8	2.0					○	○	○	○	○	○	○	○	○			
			10	2.5						○	○	○	○	○	○	○	○		13	19
			13	3.0							○	○	○	○	○	○	○			

H(2)(3)(4)…L50～70　If H dimension is (2), (3) or (4), full length L is within a range of 50～70.

Order

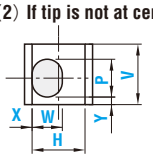
■The flange position is fixed.(WF need not be specified.)

(1) If tip is at center of shank



Catalog No.	V	H	–	L	–	0.01mm increments P	–	W	–	R(R only)
APHWES	08	08	–	60	–	P6.00	–	W4.00		

(2) If tip is not at center of shank



Catalog No.	V	H	–	L	–	0.01mm increments P	–	W	–	R(R only)	–	0.01mm increments X—Y
APHWEL	10	10	–	60	–	P6.00	–	W5.00			–	X0.00 – Y0.10

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

Days to Ship　Quotation

■Features

These block punches have greater flange strength than ordinary block punches.Use them for punching of heavy loads or high-tensile steels where punch flanges are prone to damage.

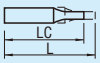
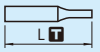
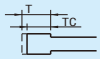
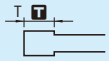
Comparison of flange dimensions　Units: mm

Type	Thickness	Width	Base R
Ordinary type	5	1.5	0.3 or less
Flange thickness 10mm type	10	2.0	0.8 ～ 1.0

Alterations

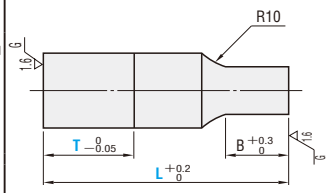
Catalog No.	V	H	L(LC)	P(PC)−W(WC)−R	X−Y	(BC-PKC, etc.)
APHWES	10	10	LC57.5	P8.00-W6.00	-	TC8.0

Price **Quotation**

Alteration		Code	Spec.	1Code
Alterations to tip		PC WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments W (WC) / Bmax.: 0.50～0.99 / 4; 1.00～1.19 / 8; 1.20～1.99 / 13; 2.00～2.99 / 20; 3.00～4.99 / 30; 5.00～ / 35	
		BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Full length (L) must be at least 36mm longer than tip length (BC).	
		SC	Lapping of tip W≧2.00 P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip D corner.	
		PKC	Tip tolerance change P・W±0.01⇨$^{+0.01}_{0}$	
		PKV	Tip tolerance change P・W±0.01⇨±0.005	
Alterations to full length		LC	Full length change 36+B(BC)≦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 36mm or less, tip length is adjusted to (Full length−36).	
		LKC	Full length tolerance change L$^{+0.2}_{0}$⇨$^{+0.05}_{0}$	
		LKZ	Full length tolerance change L$^{+0.2}_{0}$⇨$^{+0.01}_{0}$	Quotation
Alterations to flange		HC	Flange width change 1.0≦HC<2.0 0.1mm increments	
		TC	Flange thickness change 5≦TC<10 0.1mm increments (If combined with TKC, 0.01mm increments can be selected.) Full length L is shortened by (10−TC). If combined with LC, full length is equal to LC.	
		RE	Flange R change R=0.8～1.0⇨R≦0.3	
		FK	Relief chamfering is added to flange top edge.	
		TKC	Flange tolerance change T$^{+0.2}_{0}$⇨$^{+0.02}_{0}$	
		TKM	Flange tolerance change T$^{+0.2}_{0}$⇨$^{0}_{-0.02}$	
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. Chamfering of the flange base R portion is not performed.	
		VKC	Shank tolerance change V・H$^{+0.01}_{0}$⇨$^{+0.005}_{0}$	
		VKM	Shank tolerance change V・H$^{+0.01}_{0}$⇨$^{0}_{-0.005}$	
		VHM	Shank tolerance change V・H$^{+0.01}_{0}$⇨$^{0}_{-0.01}$	
		VHZ	Shank tolerance change V・H$^{+0.01}_{0}$⇨±0.005	

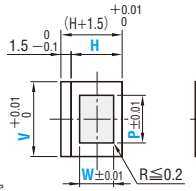
BLOCK PUNCHES
—FLANGE STOPPER TYPE—

M / H	Catalog No. Type	Tip shape	B Tip length
(H3 ~ 5) SKH51 61 ~ 64HRC (H6 ~ 30) Equivalent to SKD11 60 ~ 63HRC	HT	D R E G	S / L
SKH51 61 ~ 64HRC	HST (H6 ~ 28)		
Powdered high-speed steel 64 ~ 67HRC	PHT		Tip length (B) L>S



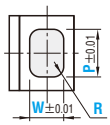
RoHS

Tip shape D



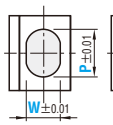
W≦P≦W×20
R=0 can be selected.

Tip shape R



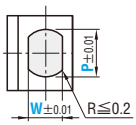
W≦P≦W×20
0.15≦R<W/2
0.01mm increments

Tip shape E



W≦P≦W×20

Tip shape G



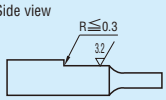
W<P≦W×20

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

Catalog No. Type	Tip shape	B Tip length	H \ V	Pmin. / Wmin.	3 / 1.5	4 / 2.0	5 / 2.5	6 / 3.0	8 / 3.0	10 / 4.0	13 / 5.0	16 / 7.0	20 / 8.0	22 / 9.0	25 / 10.0	28 / 12.0	(30) / 12.0	L	T	B S	B L
HT HST (H6 ~ 28) PHT	D R E G	S / L	(3)	1.0	○	○	○	○	○	○	○	○	○	○				(40) (50) 60 70 80 90 100	13 16 20 22 25	6	8
			(4)	1.0		○	○	○	○	○	○	○	○	○							
			5	1.2			○	○	○	○	○	○	○	○	○	○	○			8	13
			6	1.5				○	○	○	○	○	○	○	○	○	○				
			8	2.0					○	○	○	○	○	○	○	○	○			13	19
			10	2.5						○	○	○	○	○	○	○	○				
			13	3.0							○	○	○	○	○	○	○			19	25
			16	4.0								○	○	○	○	○	○				
			20	5.0									○	○	○	○	○				
			22	6.0										○	○	○	○				
			25	6.5											○	○	○				
			28	7.0												○	○				
			(30)	7.5													○				

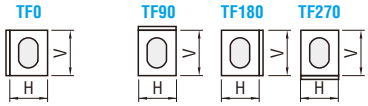
B≦L−(T+15)
L(40)・H10 ~ 30 ··· B=13 If full length is (40) and H dimension is 10 ~ 30, tip length is 13mm in all cases.
L(50)・H16 ~ 30 ··· B=19 If full length is (50) and H dimension is 16 ~ 30, tip length is 19mm in all cases.
H(3) (4) ··· L40 ~ 70 If H dimension is (3) or (4), full length L is within a range of 40 ~ 70.
H(30) V(30)···HT□□,PHT□□ H dimension of 30 and V dimension of 30 are specifications available for HT□□ and PHT□□only.

Side view

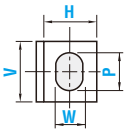


Order

■Flange position: TF specification

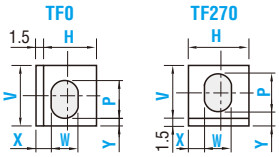


(1) If tip is at center of V and H.



Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R(R only)	—	T	—	TF
PHTES	08	08	—	60	—	P6.00	—	W4.00			—	T20	—	TF0

(2) If tip is not at center of V and H



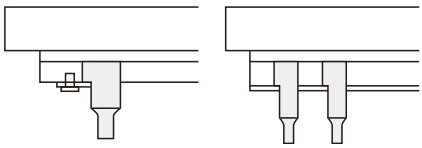
X and Y dimensions include the flange.

Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R(R only)	—	T	—	TF	—	0.01mm increments X—Y
PHTEL	10	10	—	60	—	P6.00	—	W5.00			—	T16	—	TF0	—	X2.00 — Y0.50

For TF0, X must be 1.5 or more. For TF90・TF180・TF270, X must be set either to 0 or to 0.02 or more.
For TF270, Y must be 1.5 or more. For TF0・TF90・TF180, Y must be set either to 0 or to 0.02 or more.
Tolerance±0.01

Days to Ship Quotation

Example



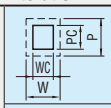
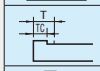
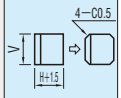
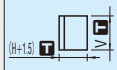
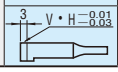
Alterations

Catalog No. V H – L(LC) – P(PC)–W(WC)–B – T(TC) – TF – X—Y – (BC·PKC, etc.)

PHTES 10 10 – LC58.5 – P8.00 – W6.00 – T20 – TF90 – HC1.0

Price

Quotation

	Alteration	Code	Spec.	1Code
Alterations to tip		WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments W (WC) / Bmax.: 0.50 ~ 0.99 / 4; 1.00 ~ 1.19 / 8; 1.20 ~ 1.99 / 13; 2.00 ~ 2.99 / 20; 3.00 ~ 4.99 / 30; 5.00 ~ / 35	
		BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Full length (L) must be at least 30mm longer than tip length (BC).	
		SC	Lapping of tip W≧2.00 P dimension tolerance and increment remain the same. R=0 cannot be selected for the tip D corner.	
		PKC	Tip tolerance change P·W±0.01 ⇨ $^{+0.01}_{0}$	
		PKV	Tip tolerance change P·W±0.01 ⇨ ±0.005	
Alterations to full length		LC	Full length change 30+B(BC)≦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).	Quotation
		LKC	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	
		LKZ	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.01}_{0}$	
Alterations to flange		HC	Flange width change 0≦HC<1.5 0.1mm increments	
		TC	Flange thickness change 2≦TC<25 0.1mm increments (If combined with TKC, 0.01mm increments can be selected.)	
		TKC	Head thickness tolerance change T $^{0}_{-0.05}$ ⇨ $^{0}_{-0.02}$	
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.	
		VKC	Shank tolerance change V·(H+1.5) $^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
		VKM	Shank tolerance change V·(H+1.5) $^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
		VHM	Shank tolerance change V·(H+1.5) $^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
		VHZ	Shank tolerance change V·(H+1.5) $^{+0.01}_{0}$ ⇨ ±0.005	
		DC	Addition of press-in lead Press-in lead of 3mm (V·H+1.5 $^{-0.01}_{-0.03}$) is added.	

BLOCK PUNCHES
—CONFIGURABLE SIZE TYPE—

●Tip machining limit

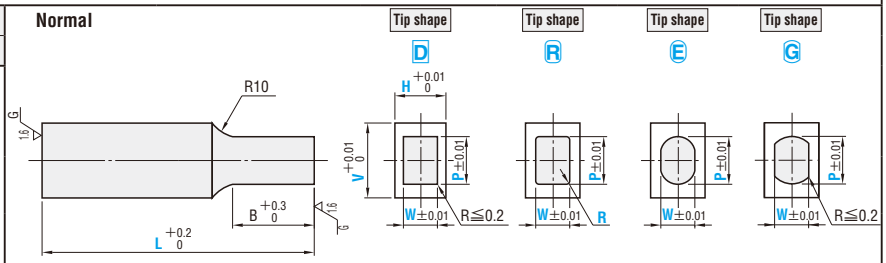
RoHS

Tip shape D	Tip shape R	Tip shape E	Tip shape G
W≦P≦W×20	W≦P≦W×20	W≦P≦W×20	W<P≦W×20
R=0 can be selected.	0.15≦R<W/2 (0.01mm increments)		

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.

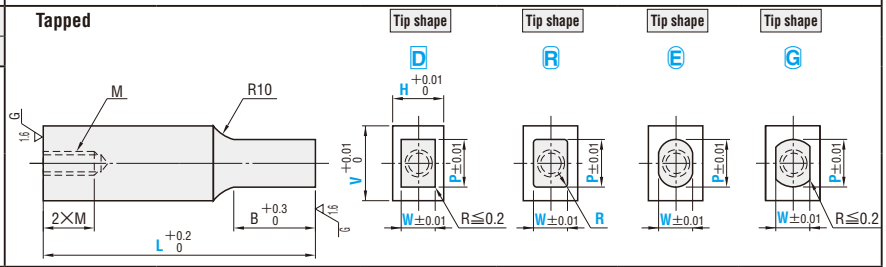
M / H	Shank dimensions V·H	Catalog No. Type	Tip shape
(H3.0 ~ 5.0) SKH51 61 ~ 64HRC (H5.1 ~ 30.0) Equivalent to SKD11 60 ~ 63HRC	V3.0 ~ 50 H3.0 ~ 30	FHP	D R
SKH51 61 ~ 64HRC	V5.1 ~ 30 H5.1 ~ 30	FHSP	E
Powdered high-speed steel 64 ~ 67HRC	V3.0 ~ 30 H3.0 ~ 30	FPHP	G

Normal



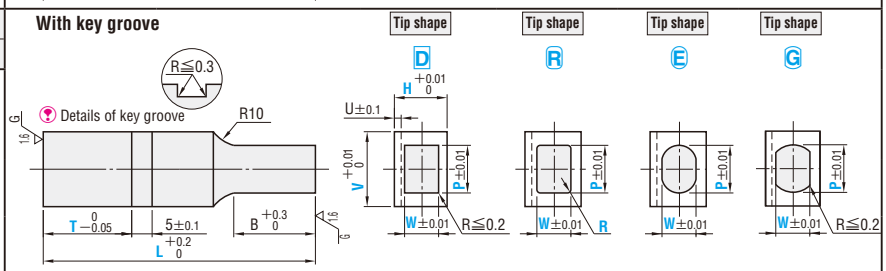
M / H	Shank dimensions V·H	Catalog No. Type	Tip shape
Equivalent to SKD11 60 ~ 63HRC	V5.1 ~ 50 H5.1 ~ 30	FHM	D R
SKH51 61 ~ 64HRC	V5.1 ~ 30 H5.1 ~ 30	FHSM	E
Powdered high-speed steel 64 ~ 67HRC	V5.1 ~ 30 H5.1 ~ 30	FPHM	G

Tapped



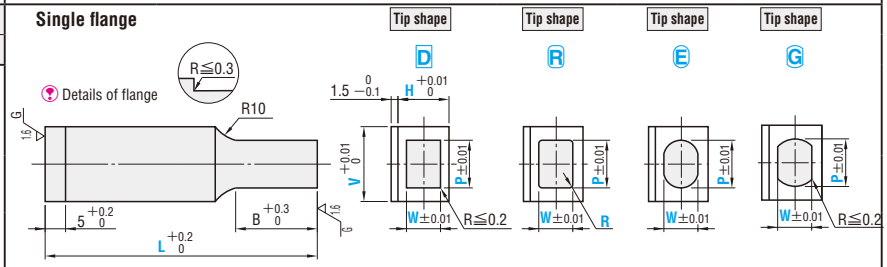
M / H	Shank dimensions V·H	Catalog No. Type	Tip shape
(H3.0 ~ 5.0) SKH51 61 ~ 64HRC (H5.1 ~ 30.0) Equivalent to SKD11 60 ~ 63HRC	V3.0 ~ 50 H3.0 ~ 30	FHK	D R
SKH51 61 ~ 64HRC	V5.1 ~ 30 H5.1 ~ 30	FHSK	E
Powdered high-speed steel 64 ~ 67HRC	V3.0 ~ 30 H3.0 ~ 30	FPHK	G

With key groove



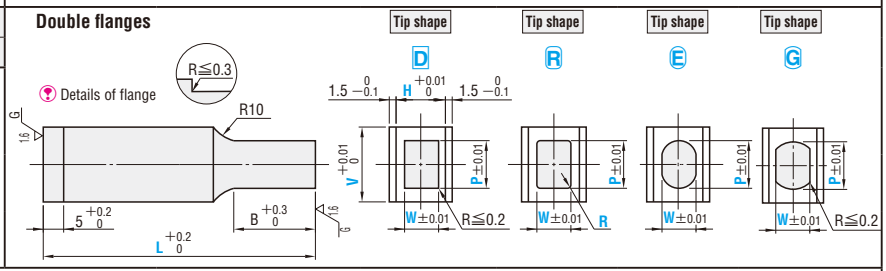
M / H	Shank dimensions V·H	Catalog No. Type	Tip shape
(H3.0 ~ 5.0) SKH51 61 ~ 64HRC (H5.1 ~ 30.0) Equivalent to SKD11 60 ~ 63HRC	V3.0 ~ 50 H3.0 ~ 30	FHF	D R
SKH51 61 ~ 64HRC	V5.1 ~ 30 H5.1 ~ 30	FHSF	E
Powdered high-speed steel 64 ~ 67HRC	V3.0 ~ 30 H3.0 ~ 30	FPHF	G

Single flange



M / H	Shank dimensions V·H	Catalog No. Type	Tip shape
(H3.0 ~ 5.0) SKH51 61 ~ 64HRC (H5.1 ~ 30.0) Equivalent to SKD11 60 ~ 63HRC	V3.0 ~ 50 H3.0 ~ 30	FHW	D R
SKH51 61 ~ 64HRC	V5.1 ~ 30 H5.1 ~ 30	FHSW	E
Powdered high-speed steel 64 ~ 67HRC	V3.0 ~ 30 H3.0 ~ 30	FPHW	G

Double flanges

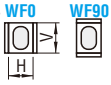


■Key groove position change
Flange position change

●With key groove

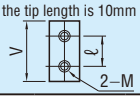
●Single flange

●Double flanges



Catalog No. Type		Tip shape	H \ V	V 3.0~4.0	4.1~5.0	5.1~6.0	6.1~8.0	8.1~10.0	10.1~13.0	13.1~16.0	16.1~20.0	20.1~25.0	25.1~30.0	30.1~40.0	40.1~50.0	L	T (0.1mm)	B	M	U
			Wmin. / Pmin.	2.0	2.5	3.0	3.0	4.0	5.0	7.0	8.0	10.0	12.0	16.0	20.0					
Normal	FHP FHSP	D	(3.0~4.0) 1.0	○	○	○	○	○	○	○	○					(40)	T≧2.0	8	—	1.0
	FHPP		4.1~5.0 1.2		○	○	○	○	○	○	○	○	○			(50)		13	—	
Tapped	FHM FHSM		5.1~6.0 1.5			○	○	○	○	○	○	○	○			60			3	
	FHPM	R	6.1~8.0 2.0				○	○	○	○	○	○	○	○		70			4	1.5
With key groove	FHK FHSK		8.1~10.0 2.5					○	○	○	○	○	○	○	○	80		19	5	
	FHPK	E	10.1~13.0 3.0						○	○	○	○	○	○	○	90			6	
	FHF FHSF		13.1~16.0 4.0							○	○	○	○	○	○	100		25	8	
Single flange	FHF FHSF		16.1~20.0 5.0								○	○	○	○	○					
	FHW FHSW	G	20.1~25.0 6.5									○	○	○	○					
Double flanges	FHPW		25.1~30.0 7.5										○	○	○					

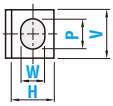
- L(40)・H8.1 ~ 30…B=13 If full length is (40) and H dimension is 8.1 ~ 30, tip length is 13mm in all cases. (For tapped types, the tip length is 10mm in all cases.)
- L(50)・H13.1 ~ 30…B=19 If full length is (50) and H dimension is 13.1 ~ 30, tip length is 19mm in all cases.
- H(3.0 ~ 4.0)…L40 ~ 70 If H dimension is (3.0 ~ 4.0), full length L is within a range of 40 ~ 70.
- V30.1 ~ 50.0…If V is 30.1 ~ 50.0, two taps are provided at the pitch shown in the figure at right.



V	ℓ
30.1 ~ 40.0	20
40.1 ~ 50.0	24

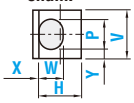
Order

(1) **If tip is at center of shank**



Catalog No.	V	H	L	P	W	R (Ⓡ only)	T≧2	K / F / WF
	0.1mm increments			0.01mm increments			0.1mm increments	
FHPD	V23.5	H12.0	60	P18.00	W 4.00			
FHMD	V17.0	H10.0	100	P16.00	W 9.00			
FPHKD	V 9.0	H 5.5	60	P 8.00	W 5.00		T25.5	K0
FPHFD	V17.0	H14.0	60	P15.00	W12.00			F0
FPHWD	V 9.5	H 6.0	40	P 8.00	W 5.00			WF90

(2) **If tip is not at center of shank**



Catalog No.	V	H	L	P	W	R (Ⓡ only)	T≧2	K / F / WF	X−Y
	0.1mm increments			0.01mm increments			0.1mm increments		0.01mm increments
FHFE	V16.5	H14.0	50	P15.00	W12.00			F0	X0.00−Y0.50

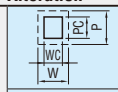
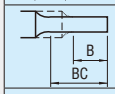
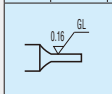
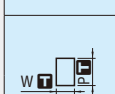
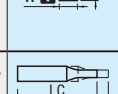
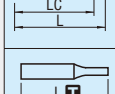
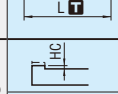
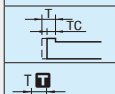
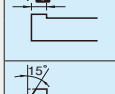
- X and Y must be set either to 0 or to 0.02 or more. Tolerance±0.01

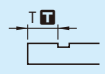
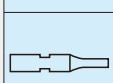
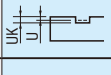
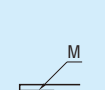
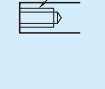
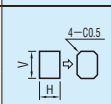
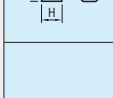
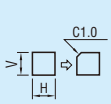
Days to Ship Quotation

Price Quotation

Catalog No. − V − H − L(LC) − P(PC)・W(WC) − T − K・F・WF − (BC・HC・TC, etc.)

FHMD − V19.0 − H7.9 − 60 − P18.00−WC1.50 − VKC−MC3

Alteration		Code	Spec.	1Code
Alterations to tip		PC WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments W (WC) / Bmax.: 0.50~0.99 / 4; 1.00~1.19 / 8; 1.20~1.99 / 13; 2.00~2.99 / 20; 3.00~4.99 / 30; 5.00~ / 35	
		BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Ⓡ Full length (L) must be at least 30mm longer than tip length (BC).	
		SC	Lapping of tip Ⓡ W≧2.00 Ⓡ P dimension tolerance and increment remain the same. ⊗ R=0 cannot be selected for the tip D corner.	
		PKC	Tip tolerance change P・W±0.01⇨+0.01 0	
		PKV	Tip tolerance change P・W±0.01⇨±0.005	Quotation
Alterations to full length		LC	Full length change 30+B(BC)≦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 +0.2 0 ⇨ +0.05 0	
		LKZ	Full length tolerance change L +0.2 0 ⇨ +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, 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 tolerance change T +0.2 0 ⇨ +0.02 0	
		TKM	Flange tolerance change T +0.2 0 ⇨ 0 −0.02	
		FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	

Alteration		Code	Spec.	1Code
Key groove		TKC	Key groove position tolerance change T 0 −0.05 ⇨ 0 −0.02	
		RTC	Key groove position tolerance change T 0 −0.05 ⇨ +0.05 0	
		WK	Addition of key groove at symmetrically opposite position K0・180 K90・270 H−(2×U(UK)≧2.0(K0,K180)) V−(2×U(UK)≧2.0(K90,K270)) An additional key groove is added in a position symmetrically opposite to the specified key groove. Ⓡ Can be used for key groove types. Ⓡ Can be combined with UK.	
		UK	Key groove depth change 0.5≦UK≦U+0.2 0.1mm increments H(V) −UK≧2.0 Ⓡ Can be used for key groove types. Ⓡ Can be combined with WK.	
Tap		MC	Tap diameter change H dimension / Standard type / selection: 6.1~8.0 / M4 / M3; 8.1~10.0 / M5 / M4・M6; 10.1~13.0 / M6 / M4(V10.1~16.0) M5・M8; 13.1~16.0 / M8 / M5(V13.1~20.0) M6・M10; 16.1~30.0 / M8 / M6・M10 Ⓡ Specify number following MC to select tap diameter. (Refer to order example.)	
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.	Quotation
		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≧1.3 Tip corner Selection of chamfering position: CCP0 CCP90 CCP180 CCP270 Ⓡ Can be used for normal and tapped types only.	
		VKC	Shank tolerance change V・H +0.01 0 ⇨ +0.005 0	
		VKM	Shank tolerance change V・H +0.01 0 ⇨ 0 −0.005	
		VHM	Shank tolerance change V・H +0.01 0 ⇨ 0 −0.01	
		VHZ	Shank tolerance change V・H +0.01 0 ⇨ ±0.005	
		DC	Addition of press-in lead Press-in lead of 3mm (V・H −0.01 −0.03) is added. Ⓡ Can be used for normal, tapped, and key groove types.	

BLOCK PUNCHES
—WPC® TREATMENT—

—WPC® Treatment—

S WPC® treatment
H 1000～1100HV
Although the effective range of the treatment is part B, a WPC® treatment layer may be formed also on the shank up to a length of approximately 10mm.

●Tip machining limit

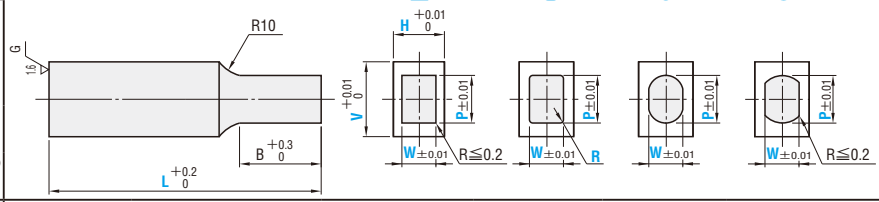
RoHS

Tip shape D	Tip shape R	Tip shape E	Tip shape G
W≦P≦W×20	W≦P≦W×20 0.15≦R<W/2 0.01mm increments	W≦P≦W×20	W<P≦W×20

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.
The tip edges are very slightly rounded.

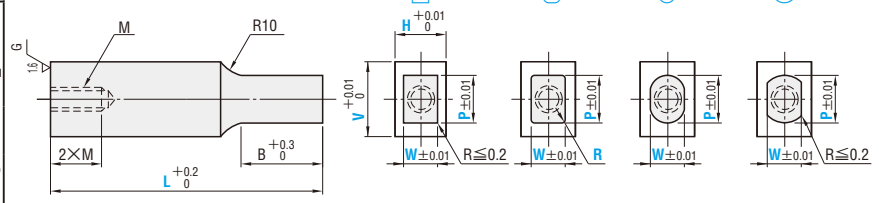
Normal V·H=3～30

M H	Catalog No. Type	Tip shape	B Tip length
(H3～5) SKH51 61～64HRC (H6～30) Equivalent to SKD11 60～63HRC	W—HP	D R E G	S L
SKH51 61～64HRC	W—HSP (H6～30)		Tip length (B) L>S
Powdered high-speed steel 64～67HRC	W—PHP		



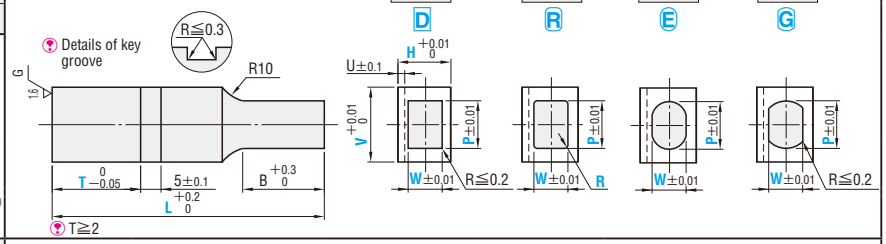
Tapped V·H=5～30

M H	Catalog No. Type	Tip shape	B Tip length
(H5) SKH51 61～64HRC (H6～30) Equivalent to SKD11 60～63HRC	W—HM	D R E G	S L
SKH51 61～64HRC	W—HSM (H6～30)		Tip length (B) L>S
Powdered high-speed steel 64～67HRC	W—PHM		



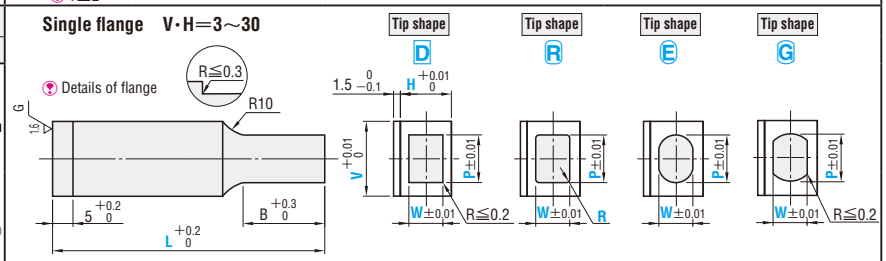
With key groove V·H=3～30

M H	Catalog No. Type	Tip shape	B Tip length
(H3～5) SKH51 61～64HRC (H6～30) Equivalent to SKD11 60～63HRC	W—HK	D R E G	S L
SKH51 61～64HRC	W—HSK (H6～30)		Tip length (B) L>S
Powdered high-speed steel 64～67HRC	W—PHK		



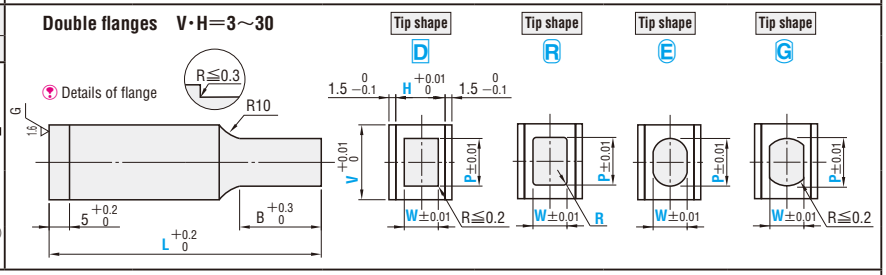
Single flange V·H=3～30

M H	Catalog No. Type	Tip shape	B Tip length
(H3～5) SKH51 61～64HRC (H6～30) Equivalent to SKD11 60～63HRC	W—HF	D R E G	S L
SKH51 61～64HRC	W—HSF (H6～30)		Tip length (B) L>S
Powdered high-speed steel 64～67HRC	W—PHF		



Double flanges V·H=3～30

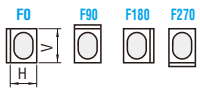
M H	Catalog No. Type	Tip shape	B Tip length
(H3～5) SKH51 61～64HRC (H6～30) Equivalent to SKD11 60～63HRC	W—HW	D R E G	S L
SKH51 61～64HRC	W—HSW (H6～30)		Tip length (B) L>S
Powdered high-speed steel 64～67HRC	W—PHW		



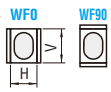
■Key groove position change
Flange position change

●With key groove

●Single flange



●Double flanges



Catalog No. / Type	Tip shape	B Tip length	H \ W \ V	P min. min.	3	4	5	6	8	10	13	16	20	22	25	28	30	L	0.1mm T	B S	B L	M	U
					1.5	2.0	2.5	3.0	3.0	4.0	5.0	7.0	8.0	9.0	10.0	12.0	12.0						
Normal W—HP W—HSP W—PHP; Tapped W—HM W—HSM W—PHM; With key groove W—HK W—HSK W—PHK; Single flange W—HF W—HSF W—PHF; Double flanges W—HW W—HSW W—PHW	D R E G	S	(3)	1.0	○	○	○	○	○	○	○	○	○	○				(40)	T≧2	6	8	—	1.0
			(4)	1.0		○	○	○	○	○	○	○	○	○				(50)				3	
			5	1.2			○	○	○	○	○	○	○	○	○	○	○			8	13	4	
			6	1.5				○	○	○	○	○	○	○	○	○	○					5	1.5
			8	2.0					○	○	○	○	○	○	○	○	○	60				6	
			10	2.5						○	○	○	○	○	○	○	○			13	19		
		L	13	3.0							○	○	○	○	○	○	○	70				8	
			16	4.0								○	○	○	○	○	○						
			20	5.0									○	○	○	○	○	80		19	25		
			22	6.0										○	○	○	○						
			25	6.5											○	○	○	90					
			28	7.0												○	○	100					
			30	7.5													○						

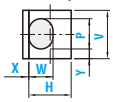
L(40)・H10 ～ 30…B=13 If full length is (40) and H dimension is 10 ～ 30, tip length is 13mm in all cases. (For tapped types, the tip length is 10mm in all cases.)
L(50)・H16 ～ 30…B=19 If full length is (50) and H dimension is 16 ～ 30, tip length is 19mm in all cases.
H(3) (4) …L40 ～ 70 If H dimension is (3) or (4), the full length L is within a range of 40 ～ 70.

Order

(1) If tip is at center of shank

Catalog No.	V	H	L	P (0.01mm increments)	W	R (Ⓡ only)	T≧2 (0.1mm increments)	K・F・WF
W—HSMRL	20	10	70	P16.00	W9.00	R0.20		
W—PHKES	10	06	60	P8.00	W5.00		T25.5	K0

(2) If tip is not at center of shank (X and Y must be set either to 0 or to 0.02 or more. Tolerance±0.01)



Catalog No.	V	H	L	P (0.01mm increments)	W	R (Ⓡ only)	T≧2 (0.1mm increments)	K・F・WF	X—Y (0.01mm increments)
W—HSFDL	16	13	50	P15.00	W12.00			F90	X0.00—Y0.55

Days to Ship

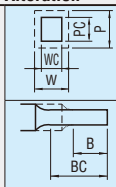
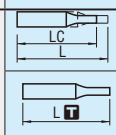
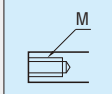
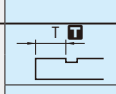
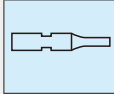
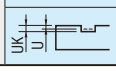
Quotation

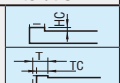
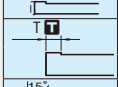
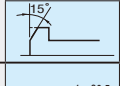
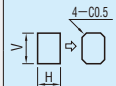
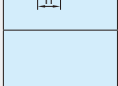
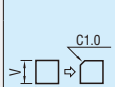
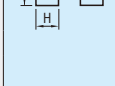
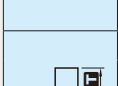
Price

Quotation

Alterations

Catalog No.	V	H	L(LC)	P(PC)・W(WC)・R	T≧2	K・F・WF	X—Y	(BC・HC・TC, etc.)
W—HSKDS	20	08	60	P18.00 WC1.50	T25.5			LKC

Alteration	Code	Spec.	1Code
Alterations to tip 	PC WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments W(WC) / Bmax.: 0.50～0.99 / 4; 1.00～1.19 / 8; 1.20～1.99 / 13; 2.00～2.99 / 20; 3.00～4.99 / 30; 5.00～ / 35	
	BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Full length (L) must be at least 30mm longer than tip length (BC).	
Alterations to full length 	LC	Full length change 30+B(BC)≦LC<L 0.1mm increments (If combined with LKC, 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$^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	
Tap 	MC (MMC)	Tap diameter change ☐Equivalent to SKD11 V / H: 6 / 8 / 10 / 13 / 16 / 20 / 22 / 25 / 28・30 6: M4→M3 — — 8: — M5→M4 — 10: — — (M6→M4, M6→M5) M6→M5 13: — — — (M8→M5, M8→M6) M8→M6 For change from M6 to M4 / For change from M8 to M5 } Select MMC ☐SKH51・Powdered high-speed steel V / H: 6 / 8 / 10 / 13 / 16 / 20 / 22 6: M4→M3 — 8: — M5→M4 10: — — M6→M5 13: — — — M8→M6	Quotation
Key groove 	TKC	Key groove position tolerance change T$^{0}_{-0.05}$ ⇨ $^{0}_{-0.02}$	
	RTC	Key groove position tolerance change T$^{0}_{-0.05}$ ⇨ $^{+0.05}_{0}$	
	WK	Addition of key groove at symmetrically opposite position K0・180 K90・270 H—{2×U(UK)}≧2.0 (K0,K180) V—{2×U(UK)}≧2.0 (K90,K270) An additional key groove is added at a position symmetrically opposite to the specified key groove. Can be used for key groove types. Can be combined with UK.	
	UK	Key groove depth change 0.5≦UK≦U+0.2 0.1mm increments H(V)—UK≧2.0 Can be used for key groove types. Can be combined with WK.	

Alteration	Code	Spec.	1Code
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, 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$^{+0.2}_{0}$ ⇨ $^{+0.02}_{0}$	
	TKM	Flange thickness tolerance change T$^{+0.2}_{0}$ ⇨ $^{0}_{-0.02}$	
	FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
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. 4—C0.5 Min. 0.5mm	Quotation
	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≧1.3 Tip corner ■Selection of chamfering position CCP0 CCP90 CCP180 CCP270 Can be used for normal and tapped types only.	
	VKC	Shank tolerance change V・H$^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
	VKM	Shank tolerance change V・H$^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
	VHM	Shank tolerance change V・H$^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
	VHZ	Shank tolerance change V・H$^{+0.01}_{0}$ ⇨ ±0.005	
	DC	Addition of press-in lead Press-in lead of 3mm (V・H$^{-0.01}_{-0.03}$) is added. Can be used for normal, tapped, and key groove types	

BLOCK PUNCHES
—TiCN COATING—

—TiCN coating—

S TiCN
H 3000HV
Although the effective range of the coating is part B, an extremely thin coating film is formed also on the shank up to a length of approximately 10mm.

●Tip machining limit

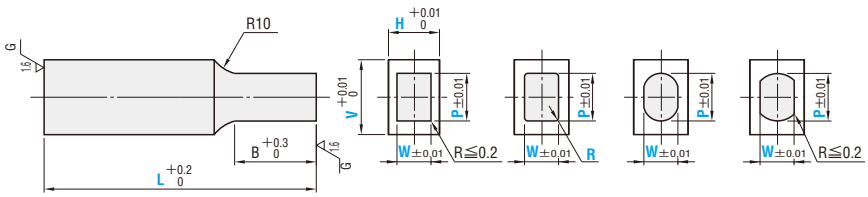
RoHS

Tip shape D	Tip shape R	Tip shape E	Tip shape G
W≦P≦W×20	W≦P≦W×20	W≦P≦W×20	W<P≦W×20
R=0 can be selected.	0.15≦R<W/2 0.01mm increments		

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.
The tip end is ground before the coating is applied.

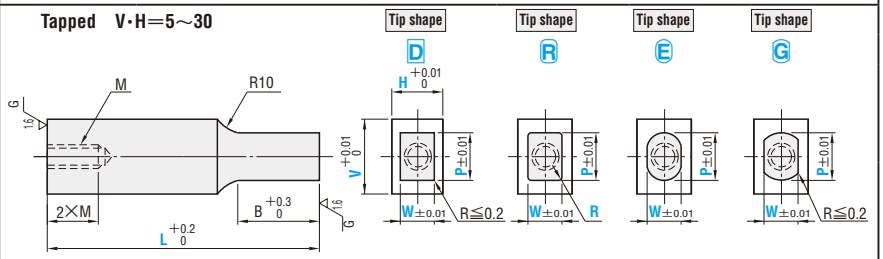
M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	H—HSP	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	H—PHP		

Normal V·H=3~30



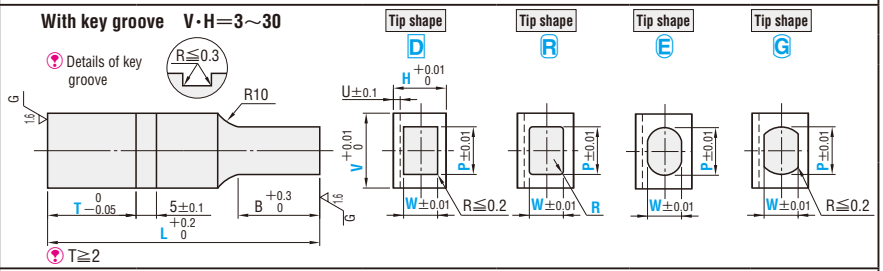
M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	H—HSM	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	H—PHM		

Tapped V·H=5~30



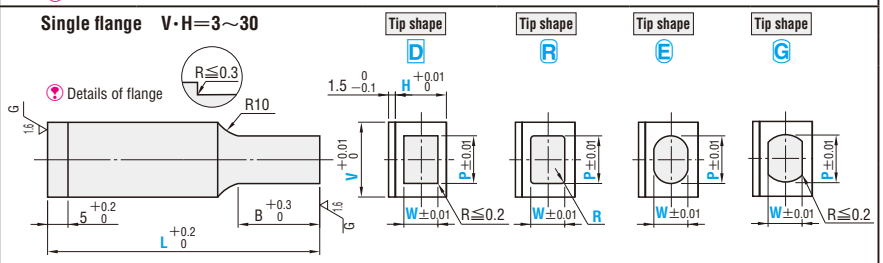
M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	H—HSK	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	H—PHK		

With key groove V·H=3~30



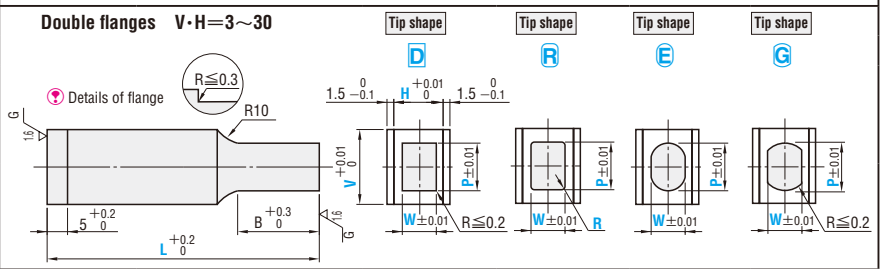
M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	H—HSF	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	H—PHF		

Single flange V·H=3~30



M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	H—HSW	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	H—PHW		

Double flanges V·H=3~30

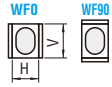


■Key groove position change
Flange position change

● With key groove

● Single flange

● Double flanges



Catalog No. Type	Tip shape	B Tip length	H	V / W min. / P min.	3 / 1.5	4 / 2.0	5 / 2.5	6 / 3.0	8 / 3.0	10 / 4.0	13 / 5.0	16 / 7.0	20 / 8.0	22 / 9.0	25 / 10.0	28 / 12.0	30 / 12.0	L	0.1mm T	B S	B L	M	U
Normal H—HSP H—PHP	D R E G	S	(3)	1.0	○	○	○	○	○	○	○	○	○	○				(40)	T≧2	6	8	—	1.0
			(4)	1.0		○	○	○	○	○	○	○	○	○									
Tapped H—HSM H—PHM			5	1.2			○	○	○	○	○	○	○	○	○	○	○	(50)		8	13	3	
			6	1.5				○	○	○	○	○	○	○	○	○	○					4	
			8	2.0					○	○	○	○	○	○	○	○	○	60				5	1.5
With key groove H—HSK H—PHK			10	2.5						○	○	○	○	○	○	○	○			13	19	6	
			13	3.0							○	○	○	○	○	○	○	70					
		L	16	4.0								○	○	○	○	○	○					8	
Single flange H—HSF H—PHF			20	5.0									○	○	○	○	○	80					
			22	6.0										○	○	○	○			19	25		
			25	6.5											○	○	○	90					
Double flanges H—HSW H—PHW			28	7.0												○	○						
			30	7.5													○	100					

L(40)・H10～30…B=13 — If full length is (40) and H dimension is 10～30, tip length is 13mm in all cases. (For tapped types, the tip length is 10mm in all cases.)
L(50)・H16～30…B=19 — If full length is (50) and H dimension is 16～30, tip length is 19mm in all cases.
H(3) (4)…L40～70 — If H dimension is (3) or (4), full length L is within a range of 40～70.

Order

(1) If tip is at center of shank

Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R(Ⓡ only)	—	0.1mm increments T≧2	—	K・F・WF
H—HSPDS	08	08	—	60	—	P 6.00	—	W 4.00						
H—HSMRL	20	10	—	70	—	P16.00	—	W 9.00	—	R0.20				
H—PHKES	10	06	—	60	—	P 8.00	—	W 5.00			—	T25.5	—	K0
H—HSFDL	16	13	—	60	—	P15.00	—	W12.00					—	F90
H—HSWEL	13	10	—	40	—	P 8.00	—	W 5.00					—	WF90

(2) If tip is not at center of shank (X and Y must be set either to 0 or to 0.02 or more. Tolerance±0.01If X and Y are 0, an additional coating layer of 3～5 μ is added.)

Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R(Ⓡ only)	—	0.1mm increments T≧2	—	K・F・WF	—	0.01mm increments X—Y
H—HSFDL	16	13	—	50	—	P15.00	—	W12.00					—	F90	—	X0.00—Y0.55

Days to Ship **Quotation**

Price **Quotation**

Alterations

Catalog No.	V	H	—	L(LC)	—	P(PC)・W(WC)・R	—	T≧2	—	K・F・WF	—	X—Y	—	(BC・HC・TC, etc.)
H—HSKDS	20	08	—	60	—	P18.00—WC1.50	—	T25.5	—	K0			—	LKC

Alteration		Code	Spec.	1Code
Alterations to tip		PC WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments W (WC) / Bmax.: 0.50～0.99 / 4; 1.00～1.19 / 8; 1.20～1.99 / 13; 2.00～2.99 / 20; 3.00～4.99 / 30; 5.00～ / 35	
		BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Full length (L) must be at least 30mm longer than tip length (BC)	
Alterations to full length		LC	Full length $30+B(BC)\leqq LC<L$ 0.1mm increments (If combined with LKC, 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).	Quotation
		LKC	Full length tolerance change $L^{+0.2}_{0} \Rightarrow {}^{+0.05}_{0}$	
Tap		MC	Tap diameter change H / V: 6 / 8 / 10 / 13 / 16 / 20 / 22 6: M4→M3 — 8: — M5→M4 10: — — M6→M5 13: — — — M8→M6	
Key groove		TKC	Key groove position tolerance change $T^{0}_{-0.05} \Rightarrow {}^{0}_{-0.02}$	
		RTC	Key groove position tolerance change $T^{0}_{-0.05} \Rightarrow {}^{+0.05}_{0}$	
		WK	Addition of key groove at symmetrically opposite position H—(2×U(UK))≧2.0(K0,K180) V—(2×U(UK))≧2.0(K90,K270) K0・180 K90・270 An additional key groove is added at a position symmetrically opposite to the specified key groove. Can be used for key groove types. Can be combined with UK.	
		UK	Key groove depth change 0.5≦UK≦U+0.2 0.1mm increments H(V)—UK≧2.0 Can be used for key groove types. Can be combined with WK.	

Alteration		Code	Spec.	1Code
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, 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 $T^{+0.2}_{0} \Rightarrow {}^{+0.02}_{0}$	
		TKM	Flange thickness tolerance change $T^{+0.2}_{0} \Rightarrow {}^{0}_{-0.02}$	
		FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
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. 4—C0.5 Min. 0.5mm	Quotation
		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≧1.3 Tip corner Tip corner ■Selection of chamfering position CCP0 CCP90 CCP180 CCP270 Can be used for normal and tapped types only.	
		VKC	Shank tolerance change $V\cdot H^{+0.01}_{0} \Rightarrow {}^{+0.005}_{0}$	
		VKM	Shank tolerance change $V\cdot H^{+0.01}_{0} \Rightarrow {}^{0}_{-0.005}$	
		VHM	Shank tolerance change $V\cdot H^{+0.01}_{0} \Rightarrow {}^{0}_{-0.01}$	
		VHZ	Shank tolerance change $V\cdot H^{+0.01}_{0} \Rightarrow \pm 0.005$	
		DC	Addition of press-in lead Press-in lead of 3mm $(V\cdot H^{-0.01}_{-0.03})$ is added. Can be used for normal, tapped, and key groove types.	

BLOCK PUNCHES
—HW COATING—

—HW coating—

S HW coating
H 3000HV
Although the effective range of the coating is part B, an extremely thin coating film is formed also on the shank up to a length of approximately 10mm.

●Tip machining limit

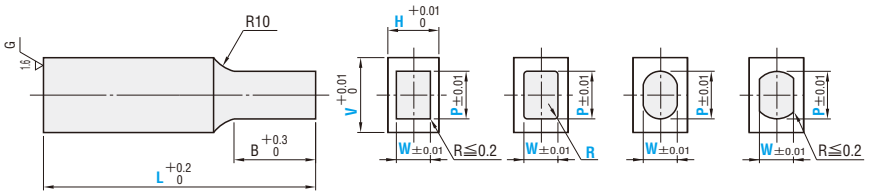
RoHS

Tip shape D	Tip shape R	Tip shape E	Tip shape G
W≦P≦W×20	W≦P≦W×20 0.15≦R<W/2 0.01mm increments	W≦P≦W×20	W<P≦W×20

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.
The tip edges are very slightly rounded.

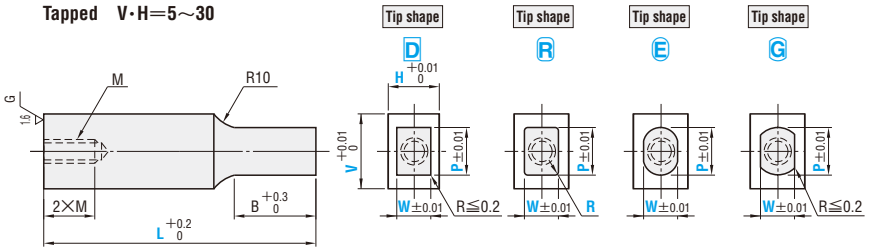
M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	HW—HSP	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	HW—PHP		

Normal V·H=3~30



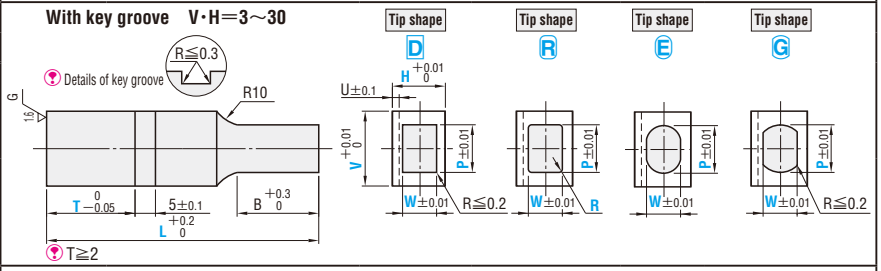
M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	HW—HSM	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	HW—PHM		

Tapped V·H=5~30



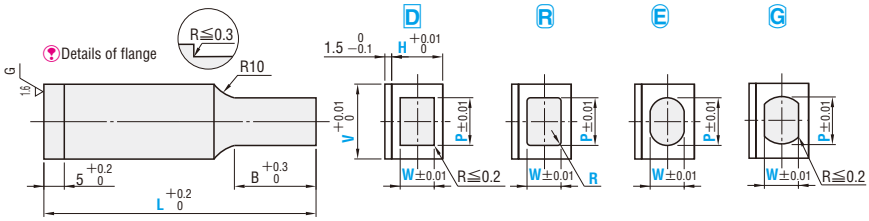
M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	HW—HSK	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	HW—PHK		

With key groove V·H=3~30



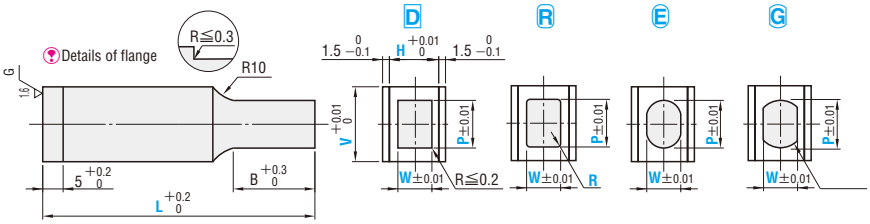
M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	HW—HSF	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	HW—PHF		

Single flange V·H=3~30



M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	HW—HSW	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	HW—PHW		

Double flanges V·H=3~30

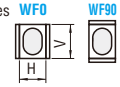


■Key groove position change
Flange position change

●With key groove

●Single flange

●Double flanges



Catalog No. Type	Tip shape	B Tip length	H	V (P min. / W min.)	3 / 1.5	4 / 2.0	5 / 2.5	6 / 3.0	8 / 3.0	10 / 4.0	13 / 5.0	16 / 7.0	20 / 8.0	22 / 9.0	25 / 10.0	28 / 12.0	30 / 12.0	L	0.1mm T	B S	B L	M	U
Normal HW—HSP, HW—PHP	D, R, E, G	S	(3)	1.0	○	○	○	○	○	○	○	○	○	○				(40)	T≧2	6	8	—	1.0
			(4)	1.0		○	○	○	○	○	○	○	○	○									
Tapped HW—HSM, HW—PHM			5	1.2			○	○	○	○	○	○	○	○	○	○	○	(50)		8	13	3	
			6	1.5				○	○	○	○	○	○	○	○	○	○					4	
			8	2.0					○	○	○	○	○	○	○	○	○	60				5	1.5
With key groove HW—HSK, HW—PHK			10	2.5						○	○	○	○	○	○	○	○			13	19	6	
			13	3.0							○	○	○	○	○	○	○	70					
		L	16	4.0								○	○	○	○	○	○					8	
Single flange HW—HSF, HW—PHF			20	5.0									○	○	○	○	○	80					
			22	6.0										○	○	○	○			19	25		
Double flanges HW—HSW, HW—PHW			25	6.5											○	○	○	90					
			28	7.0												○	○						
			30	7.5													○	100					

- L(40)・H10～30…B=13 If full length is (40) and H dimension is 10～30, tip length is 13mm in all cases. (For tapped types, the tip length is 10mm in all cases.)
- L(50)・H16～30…B=19 If full length is (50) and H dimension is 16～30, tip length is 19mm in all cases.
- H(3)(4)…L40～70 If H dimension is (3) or (4), full length L is within a range of 40～70.

Order

(1) If tip is at center of shank

Catalog No.	V	H	—	L	—	0.01mm increments: P	—	W	—	R (Ⓡ only)	—	0.1mm increments: T≧2	—	K・F・WF
HW—HSPDS	08	08	—	60	—	P 6.00	—	W 4.00						
HW—HSMRL	20	10	—	70	—	P16.00	—	W 9.00	—	R0.20				
HW—PHKES	10	06	—	60	—	P 8.00	—	W 5.00			—	T25.5	—	K0
HW—HSFDL	16	13	—	60	—	P15.00	—	W12.00					—	F90
HW—HSWEL	13	10	—	40	—	P 8.00	—	W 5.00					—	WF90

(2) If tip is not at center of shank (X and Y must be set either to 0 or to 0.02 or more. Tolerance±0.01. If X and Y are 0, an additional coating layer of 3～5 μ is added.)

Catalog No.	V	H	—	L	—	0.01mm increments: P	—	W	—	R (Ⓡ only)	—	0.1mm increments: T≧2	—	K・F・WF	—	0.01mm increments: X—Y
HW—HSFDL	16	13	—	50	—	P15.00	—	W12.00					—	F90	—	X0.00—Y0.55

Days to Ship Quotation

Price Quotation

Alterations

Catalog No.	V	H	—	L(LC)	—	P(PC)・W(WC)・R	—	T≧2	—	K・F・WF	—	X—Y	—	(BC・HC・TC, etc.)
HW—HSKDS	20	08	—	60	—	P18.00—WC1.50	—	T25.5	—	K0			—	LKC

Alteration	Code	Spec.	1Code
Alterations to tip	PC, WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments (W(WC) / Bmax.: 0.50～0.99 / 4; 1.00～1.19 / 8; 1.20～1.99 / 13; 2.00～2.99 / 20; 3.00～4.99 / 30; 5.00～ / 35)	
	BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Full length (L) must be at least 30mm longer than tip length (BC).	
Alterations to full length	LC	Full length change 30+B(BC)≦LC<L 0.1mm increments (If combined with LKC, 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).	Quotation
	LKC	Full length tolerance change $L^{+0.2}_{0} \Rightarrow {}^{+0.05}_{0}$	
Tap	MC	Tap diameter change (V: 6, 8, 10, 13, 16, 20, 22; 6: M4 → M3; 8: M5 → M4; 10: M6 → M5; 13: M8 → M6)	
Key groove	TKC	Key groove position tolerance change $T_{-0.05} \Rightarrow {}^{0}_{-0.02}$	
	RTC	Key groove position tolerance change $T_{-0.05} \Rightarrow {}^{+0.05}_{0}$	
	WK	Addition of key groove at symmetrically opposite position K0・180 K90・270 H—|2×U(UK)|≧2.0(K0,K180) V—|2×U(UK)|≧2.0(K90,K270) An additional key groove is added at a position symmetrically opposite to the specified key groove. Can be used for key groove types. Can be combined with UK.	
	UK	Key groove depth change 0.5≦UK≦U+0.2 0.1mm increments H(V)—UK≧2.0 Can be used for key groove types. Can be combined with WK.	

Alteration	Code	Spec.	1Code
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, 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 $T^{+0.2}_{0} \Rightarrow {}^{+0.02}_{0}$	
	TKM	Flange thickness tolerance change $T^{+0.2}_{0} \Rightarrow {}^{0}_{-0.02}$	
	FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
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. (4—C0.5; Min. 0.5mm)	Quotation
	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≧1.3 (Tip corner) ■Selection of chamfering position CCP0 CCP90 CCP180 CCP270 Can be used for normal and tapped types only.	
	VKC	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow {}^{+0.005}_{0}$	
	VKM	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow {}^{0}_{-0.005}$	
	VHM	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow {}^{0}_{-0.01}$	
	VHZ	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow \pm 0.005$	
	DC	Addition of press-in lead Press-in lead of 3mm ($V・H^{-0.01}_{-0.03}$) is added. Can be used for normal, tapped, and key groove types.	

JECTOR BLOCK PUNCHES
—WPC® TREATMENT—

—WPC® treatment—

RoHS

S WPC® treatment
H 1000～1100HV
Although the effective range of the treatment is part B , a WPC® treatment layer may be formed also on the shank up to a length of approximately 10mm.
Details of jector hole P.361

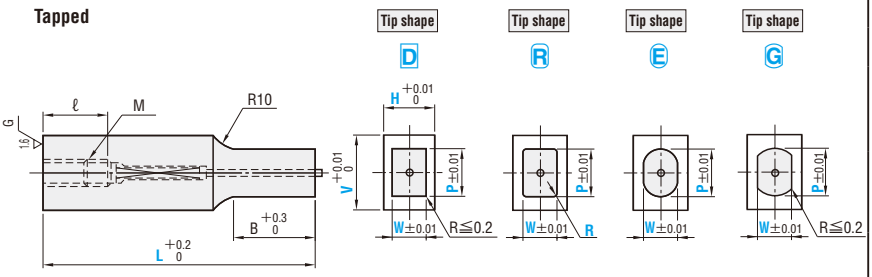
●Tip machining limit

Tip shape D	Tip shape R	Tip shape E	Tip shape G
W≦P	W≦P 0.15≦R＜W/2 0.01mm increments	W≦P	W＜P

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.
The tip edges are very slightly rounded.

M H	Catalog No. Type	Tip shape	B Tip length
Equivalent to SKD11 60～63HRC	W—HJM	D R E G	S L Tip length (B) L>S
SKH51 61～64HRC	W—HSJM		
Powdered high-speed steel 64～67HRC	W—PHJM		

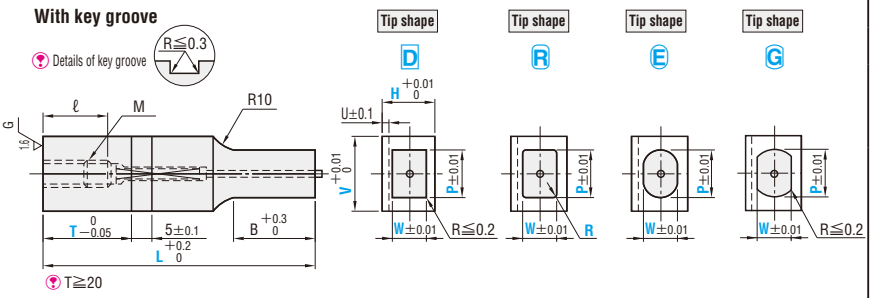
Tapped



M H	Catalog No. Type	Tip shape	B Tip length
Equivalent to SKD11 60～63HRC	W—HJK	D R E G	S L Tip length (B) L>S
SKH51 61～64HRC	W—HSJK		
Powdered high-speed steel 64～67HRC	W—PHJK		

With key groove

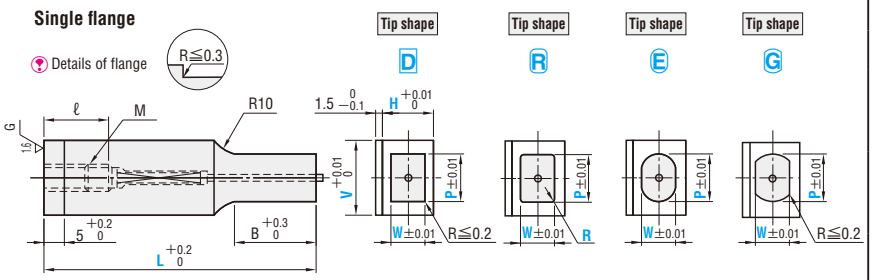
Details of key groove R≦0.3



M H	Catalog No. Type	Tip shape	B Tip length
Equivalent to SKD11 60～63HRC	W—HJF	D R E G	S L Tip length (B) L>S
SKH51 61～64HRC	W—HSJF		
Powdered high-speed steel 64～67HRC	W—PHJF		

Single flange

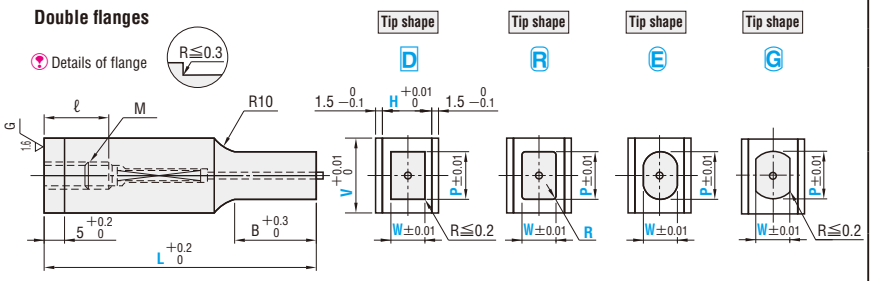
Details of flange R≦0.3



M H	Catalog No. Type	Tip shape	B Tip length
Equivalent to SKD11 60～63HRC	W—HJW	D R E G	S L Tip length (B) L>S
SKH51 61～64HRC	W—HSJW		
Powdered high-speed steel 64～67HRC	W—PHJW		

Double flanges

Details of flange R≦0.3



Catalog No.		Tip shape	B Tip length	H \ V	6	8	10	13	16	20	22	25	28	30	L	0.1mm T	B S	B L	M	ℓ	U
				Pmin.	3.0	3.0	4.0	5.0	7.0	8.0	9.0	10.0	12.0	12.0							
Type				Wmin.																	
Tapped	W—HJM W—HSJM W—PHJM	D	S	6 2.0	○	○	○	○	○	○	○	○	○	○	(40)	T≧20	8	13	4	12	1.0
With key groove	W—HJK W—HSJK W—PHJK	R		8 2.5		○	○	○	○	○	○	○	○	○	(50)				5		1.5
Single flange	W—HJF W—HSJF W—PHJF	E	L	10 3.0			○	○	○	○	○	○	○	○	60		13	19	6		
Double flanges	W—HJW W—HSJW W—PHJW	G		13 4.0				○	○	○	○	○	○	○	70				8		
				16 5.0					○	○	○	○	○	○	80		19	25			
				20 6.0						○	○	○	○	○							
				22 6.0							○	○	○	○							
				25 6.0								○	○	○							

(L(40) ···B=6 If full length is (40), tip length is 6mm in all cases.
(L(50)・H10～25···B=13(10) If full length is (50) and H dimension is 10～25, tip length is 13mm in all cases. (For types with key grooves, the tip length is 10mm.)

Order

■Key groove position and flange position change

With key groove				Single flange				Double flanges	
K0	K90	K180	K270	F0	F90	F180	F270	WF0	WF90

(1) If tip is at center of shank

Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R (Ⓡ only)	—	0.1mm increments T≧20	—	K・F・WF
W—HSJMRL	20	10	—	70	—	P16.00	—	W 9.00	—	R0.15				
W—PHJKES	08	06	—	60	—	P 7.00	—	W 5.00			—	T25.5	—	K0
W—HSJFDL	16	13	—	60	—	P15.00	—	W12.00					—	F90
W—HSJWEL	13	10	—	40	—	P 8.00	—	W 5.00					—	WF90

(2) If tip is not at center of shank

Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R (Ⓡ only)	—	0.1mm increments T≧20	—	K・F・WF	—	0.01mm increments X—Y
W—HSJFDL	16	13	—	50	—	P15.00	—	W12.00					—	F90	—	X0.00—Y0.55

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

H	Zmin.
6・8	1.0
10・13	1.5
16～25	2.0

When the tip position is changed, the jector hole must be located at least Zmin. away from the tip edges.
The jector hole position cannot be changed.

Days to Ship **Quotation**

Price **Quotation**

Alterations

Catalog No.	V	H	—	L(LC)	—	P・W・R	—	T	—	K・F・WF	—	X—Y	—	(BC・HC・TC, etc.)
W—HSJMDS	20	08	—	60	—	P18.00—W3.50							—	LKC

	Alteration	Code	Spec.	1Code
Tip		BC	Tip length change (shorter than standard) 2≦BC≦B 0.1mm increments	
Alterations to full length		LC	Full length change LC<L 0.1mm increments (If combined with LKC, 0.01mm increments can be selected.) (Tip length B is shortened by (L—LC).	
		LKC	Full length tolerance change $L^{+0.2}_{0} \Rightarrow {}^{+0.05}_{0}$	
Key groove		TKC	Key groove position tolerance change $T^{0}_{-0.05} \Rightarrow {}^{0}_{-0.02}$	
		RTC	Key groove position tolerance change $T^{0}_{-0.05} \Rightarrow {}^{+0.05}_{0}$	
		UK	Key groove depth change (Can be used for key groove types.) 0.5≦UK≦U+0.2 0.1mm increments (Can be used for H≧10 (K0,K180) V≧10 (K90,K270) .	Quotation
Alterations to flange		HC	Flange width change 0≦HC<1.5 0.1mm increments	
		TC	Flange thickness change 3.5≦TC<5 0.1mm increments (If combined with TKC, 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 $T^{+0.2}_{0} \Rightarrow {}^{+0.02}_{0}$	
		TKM	Flange thickness tolerance change $T^{+0.2}_{0} \Rightarrow {}^{0}_{-0.02}$	
		FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
Shape		JVC	Change of spring to reinforced type (8≦H≦25···Can be used for L≧60. (Cannot be used for H6.	

	Alteration	Code	Spec.	1Code
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.	
		AC	The jector pin is removed to create an air path and the side vent hole is plugged from the inside by inserting a resin (ABS) ring.	
		NC	The jector pin is removed. (Cannot be combined with AC.	
		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≧1.3 ■Selection of chamfering position (Can be used for tapped types only.	Quotation
		VKC	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow {}^{+0.005}_{0}$	
		VKM	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow {}^{0}_{-0.005}$	
		VHM	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow {}^{0}_{-0.01}$	
		VHZ	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow \pm0.005$	
		DC	Addition of press-in lead Press-in lead of 3mm ($V・H^{-0.01}_{-0.03}$) is added. (Can be used for tapped types and key groove types.	

JECTOR BLOCK PUNCHES

—TiCN COATING—

—TiCN coating—

RoHS

S TiCN
H 3000HV
Although the effective range of the coating is part B, an extremely thin coating film is formed also on the shank up to a length of approximately 10mm.
Details of jector hole P.361

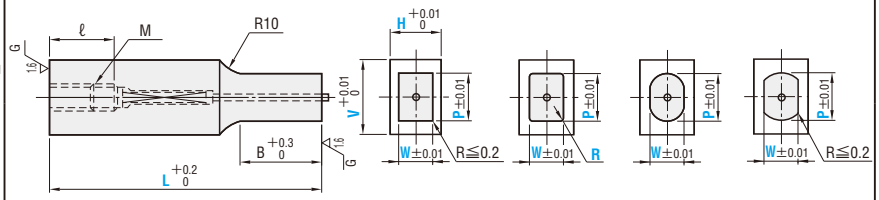
●Tip machining limit

Tip shape D	Tip shape R	Tip shape E	Tip shape G
W≦P	W≦P	W≦P	W<P
R=0 can be selected.	0.15≦R<W/2 0.01mm increments		

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.
The tip end is ground before the coating is applied.

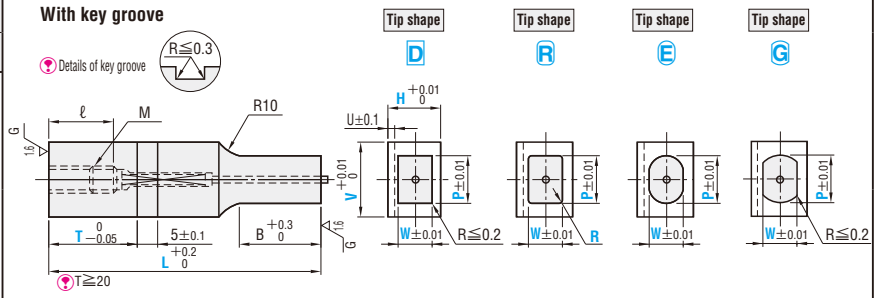
Tapped

M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	H—HSJM	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	H—PHJM		



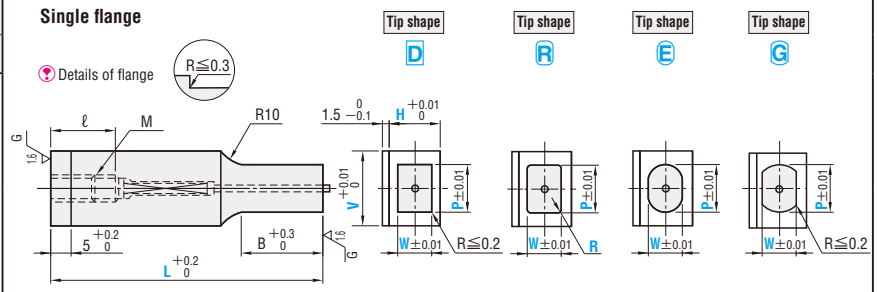
With key groove

M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	H—HSJK	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	H—PHJK		



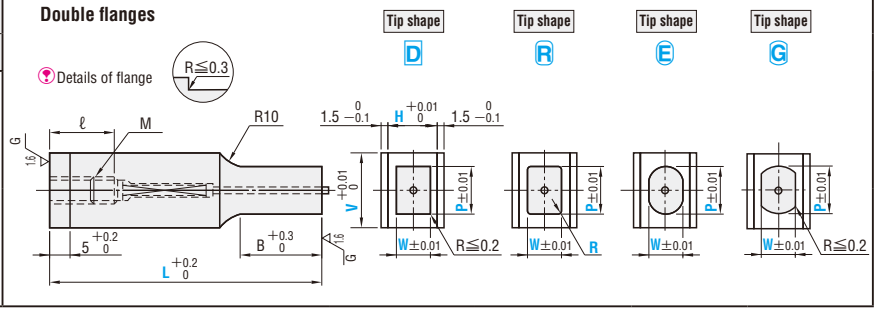
Single flange

M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	H—HSJF	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	H—PHJF		



Double flanges

M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	H—HSJW	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	H—PHJW		



Catalog No. Type	Tip shape	B Tip length	H \ V	6	8	10	13	16	20	22	25	28	30	L	0.1mm T	B S	B L	M	ℓ	U
			Pmin. / Wmin.	3.0	3.0	4.0	5.0	7.0	8.0	9.0	10.0	12.0	12.0							
Tapped H—HSJM	D	S	6 / 2.0	○	○	○	○	○	○	○	○	○	○	(40)	T≧20	8	13	4	12	1.0
H—PHJM			8 / 2.5		○	○	○	○	○	○	○	○	○	(50)				5		
With key groove H—HSJK	R		10 / 3.0			○	○	○	○	○	○	○	○	60		13	19	6		1.5
H—PHJK			13 / 4.0				○	○	○	○	○	○	○	70				8		
Single flange H—HSJF	E	L	16 / 5.0					○	○	○	○	○	○	80		19	25			
H—PHJF			20 / 6.0						○	○	○	○	○							
Double flanges H—HSJW	G		22 / 6.0							○	○	○	○							
H—PHJW			25 / 6.0								○	○	○							

L(40) ···B=6 If full length is (40), tip length is 6mm in all cases.
L(50)・H10～25···B=13(10) If full length is (50) and H dimension is 10～25, tip length is 13mm in all cases. (For types with key grooves, the tip length is 10mm.)

Order

■Key groove position・flange position change

With key groove	Single flange	Double flanges
K0, K90, K180, K270	F0, F90, F180, F270	WF0, WF90

(1) If tip is at center of shank

Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R(Ⓡ only)	—	0.1mm increments T≧20	—	K・F・WF
H—HSJMRL	20	10	—	70	—	P16.00	—	W9.00	—	R0.15				
H—PHJKES	08	06	—	60	—	P7.00	—	W5.00			—	T25.5	—	K0
H—HSJFDL	16	13	—	60	—	P15.00	—	W12.00					—	F90
H—HSJWEL	13	10	—	40	—	P8.00	—	W5.00					—	WF90

(2) If tip is not at center of shank

Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R(Ⓡ only)	—	0.1mm increments T≧20	—	K・F・WF	—	0.01mm increments X—Y
H—HSJFDL	16	13	—	50	—	P15.00	—	W12.00					—	F90	—	X0.00—Y0.55

(X and Y must be set either to 0 or to 0.02 or more. Tolerance±0.01. If X and Y are 0, an additional coating layer of 3～5 μ is added.)

H	Zmin.
6・8	1.0
10・13	1.5
16～25	2.0

When the tip position is changed, the jector hole must be located at least Zmin. away from the tip edges. The jector hole position cannot be changed.

Days to Ship Quotation

Price Quotation

Alterations

Catalog No.	V	H	—	L(LC)	—	P・W・R	—	T	—	K・F・WF	—	X—Y	—	(BC・HC・TC, etc.)
H—HSJMDS	20	08	—	60	—	P18.00—W3.50							—	LKC

Alteration	Code	Spec.	1Code
Tip			
	BC	Tip length change (shorter than standard) 2≦BC≦B 0.1mm increments	Quotation
Alterations to full length			
	LC	Full length change LC<L 0.1mm increments (If combined with LKC, 0.01mm increments can be selected.) Tip length B is shortened by (L—LC).	
	LKC	Full length tolerance change $L^{+0.2}_{0} \Rightarrow {}^{+0.05}_{0}$	
Key groove			
	TKC	Key groove position tolerance change $T^{0}_{-0.05} \Rightarrow {}^{0}_{-0.02}$	
	RTC	Key groove position tolerance change $T^{0}_{-0.05} \Rightarrow {}^{+0.05}_{0}$	
	UK	Key groove depth change Can be used for key groove types. 0.5≦UK≦U+0.2 0.1mm increments Can be used for H≧10 (K0,K180) V≧10 (K90,K270).	
Alterations to flange			
	HC	Flange width change 0≦HC<1.5 0.1mm increments	
	TC	Flange thickness change 3.5≦TC<5 0.1mm increments (If combined with TKC, 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 $T^{+0.2}_{0} \Rightarrow {}^{+0.02}_{0}$	
	TKM	Flange thickness tolerance change $T^{+0.2}_{0} \Rightarrow {}^{0}_{-0.02}$	
	FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
Shape			
	JVC	Change of spring to reinforced type 8≦H≦25···Can be used for L≧60 Cannot be used for H6.	

Alteration	Code	Spec.	1Code
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.	Quotation
	AC	The jector pin is removed to create an air path and the side vent hole is plugged from the inside by inserting a resin (ABS) ring.	
	NC	The jector pin is removed. Cannot be combined with AC.	
	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≧1.3 ■Selection of chamfering position Can be used for tapped types only.	
	VKC	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow {}^{+0.005}_{0}$	
	VKM	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow {}^{0}_{-0.005}$	
	VHM	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow {}^{0}_{-0.01}$	
	VHZ	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow \pm 0.005$	
	DC	Addition of press-in lead Press-in lead of 3mm ($V・H^{-0.01}_{-0.03}$) is added. Can be used for tapped types and key groove types.	

JECTOR BLOCK PUNCHES
—HW COATING—

—HW coating—

RoHS

S HW coating
H 3000HV
Although the effective range of the coating is part B, an extremely thin coating film is formed also on the shank up to a length of approximately 10mm.
Details of jector hole P.361

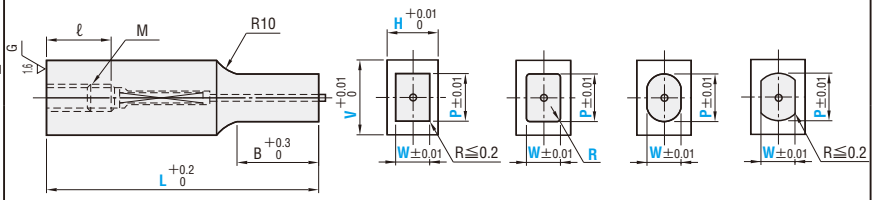
●Tip machining limit

Tip shape D	Tip shape R	Tip shape E	Tip shape G
W≦P	W≦P 0.15≦R<W/2 0.01mm increments	W≦P	W<P

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.
The tip edges are very slightly rounded.

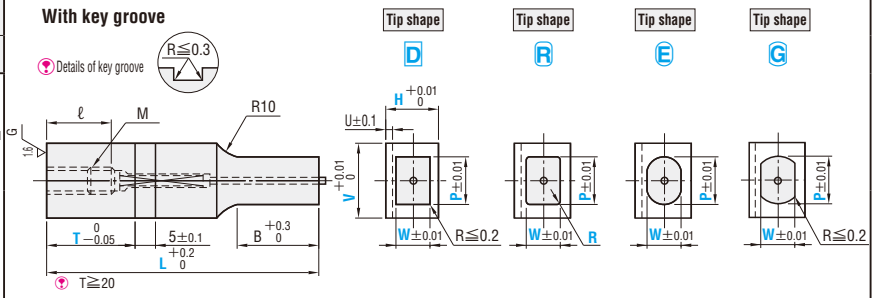
Tapped

M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	HW—HSJM	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	HW—PHJM		



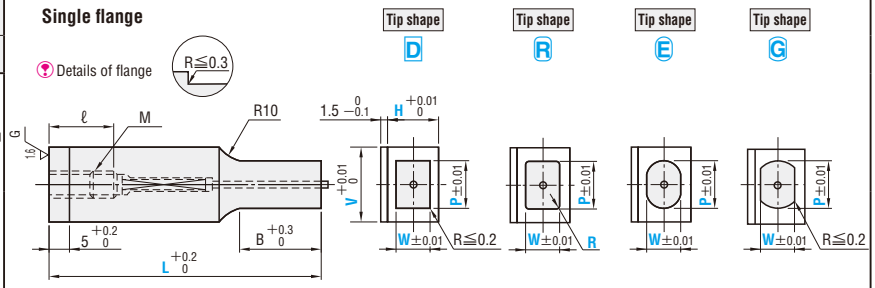
With key groove

M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	HW—HSJK	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	HW—PHJK		



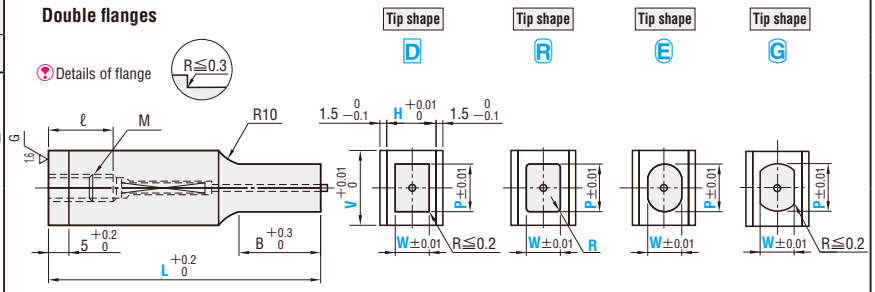
Single flange

M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	HW—HSJF	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	HW—PHJF		



Double flanges

M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	HW—HSJW	D R E G	S L Tip length (B) L>S
Powdered high-speed steel 64~67HRC	HW—PHJW		



Catalog No. Type	Tip shape	B Tip length	H \ V (P min. / W min.)	6 (3.0)	8 (3.0)	10 (4.0)	13 (5.0)	16 (7.0)	20 (8.0)	22 (9.0)	25 (10.0)	28 (12.0)	30 (12.0)	L	0.1mm T	B S	B L	M	ℓ	U
Tapped HW—HSJM	D	S	6 2.0	○	○	○	○	○	○	○	○	○	○	(40)	T≧20	8	13	4	12	1.0
HW—PHJM			8 2.5		○	○	○	○	○	○	○	○	○	(50)				5		1.5
With key groove HW—HSJK	R		10 3.0			○	○	○	○	○	○	○	○	60		13	19	6		
HW—PHJK			13 4.0				○	○	○	○	○	○	○	70				8		
Single flange HW—HSJF	E	L	16 5.0					○	○	○	○	○	○	80		19	25			
HW—PHJF			20 6.0						○	○	○	○	○							
Double flanges HW—HSJW	G		22 6.0							○	○	○	○							
HW—PHJW			25 6.0								○	○	○							

L(40) ···B=6 If full length is(40), tip length is 6mm in all cases.
L(50)・H10～25···B=13(10) If the full length is(50)and H dimension is 10～25, the tip length is 13mm in all cases. (For types with key grooves, the tip length is 10mm.)

Order

■Key groove position・flange position change

With key groove	Single flange	Double flanges
K0 K90 K180 K270	F0 F90 F180 F270	WF0 WF90

(1) If tip is at center of shank

Catalog No.	V	H	L	P (0.01mm increments)	W (0.01mm increments)	R(Ⓡ only)	T≧20 (0.1mm increments)	K・F・WF
HW—HSJMRL	20	10	70	P16.00	W 9.00	R0.15		
HW—PHJKES	08	06	60	P 7.00	W 5.00		T25.5	K0
HW—HSJFDL	16	13	60	P15.00	W12.00			F90
HW—HSJWEL	13	10	40	P 8.00	W 5.00			WF90

(2) If tip is not at center of shank

Catalog No.	V	H	L	P (0.01mm increments)	W (0.01mm increments)	R(Ⓡ only)	T≧20 (0.1mm increments)	K・F・WF	X—Y (0.01mm increments)
HW—HSJFDL	16	13	50	P15.00	W12.00			F90	X0.00—Y0.55

(X and Y must be set either to 0 or to 0.02 or more.Tolerance±0.01. If X and Y are 0, an additional coating layer of 3～5 μ is added.)

H	Zmin.
6・8	1.0
10・13	1.5
16～25	2.0

When the tip position is changed, the jector hole must be located at least Zmin. away from the tip edges. The jector hole position cannot be changed.

Days to Ship Quotation

Price Quotation

Alterations

Catalog No. V H — L(LC) — P・W・R — T — K・F・WF — X—Y — (BC・HC・TC, etc.)
HW—HSJMDS 20 08 — 60 — P18.00—W3.50 — LKC

Alteration	Code	Spec.	1Code
Tip	BC	Tip length change(shorter than standard) 2≦BC≦B 0.1mm increments	
Alterations to full length	LC	Full length change LC<L 0.1mm increments(If combined with LKC, 0.01mm increments can be selected.) Tip length B is shortened by(L—LC).	
	LKC	Full length tolerance change $L^{+0.2}_{0} \Rightarrow {}^{+0.05}_{0}$	
Key groove	TKC	Key groove position tolerance change $T^{0}_{-0.05} \Rightarrow {}^{0}_{-0.02}$	
	RTC	Key groove position tolerance change $T^{0}_{-0.05} \Rightarrow {}^{+0.05}_{0}$	
	UK	Key groove depth change Can be used for key groove types. 0.5≦UK≦U+0.2 0.1mm increments Can be used for H≧10(K0,K180) V≧10(K90,K270).	Quotation
Alterations to flange	HC	Flange width change 0≦HC<1.5 0.1mm increments	
	TC	Flange thickness change 3.5≦TC<5 0.1mm increments(If combined with TKC, 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 $T^{+0.2}_{0} \Rightarrow {}^{+0.02}_{0}$	
	TKM	Flange thickness tolerance change $T^{+0.2}_{0} \Rightarrow {}^{0}_{-0.02}$	
	FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
Shape	JVC	Change of spring to reinforced type 8≦H≦25···Can be used for L≧60 Cannot be used for H6.	

Alteration	Code	Spec.	1Code
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.	
	AC	The jector pin is removed to create an air path and the side vent hole is plugged from the inside by inserting a resin(ABS)ring.	
	NC	The jector pin is removed. Cannot be combined with AC.	
	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≧1.3 ■Selection of chamfering position CCP0 CCP90 CCP180 CCP270 Can be used for tapped types only.	Quotation
	VKC	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow {}^{+0.005}_{0}$	
	VKM	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow {}^{0}_{-0.005}$	
	VHM	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow {}^{0}_{-0.01}$	
	VHZ	Shank tolerance change $V・H^{+0.01}_{0} \Rightarrow \pm 0.005$	
	DC	Addition of press-in lead Press-in lead of 3mm($V・H^{-0.01}_{-0.03}$)is added. Can be used for tapped types and key groove types.	

BLOCK PUNCHES (FOR HEAVY LOAD)

—FLANGE THICKNESS 10mm・TiCN COATING—

—TiCN coating—

S TiCN
H 3000HV
Although the effective range of the coating is part B, an extremely thin coating film is formed also on the shank up to a length of approximately 10mm.

●Tip machining limit

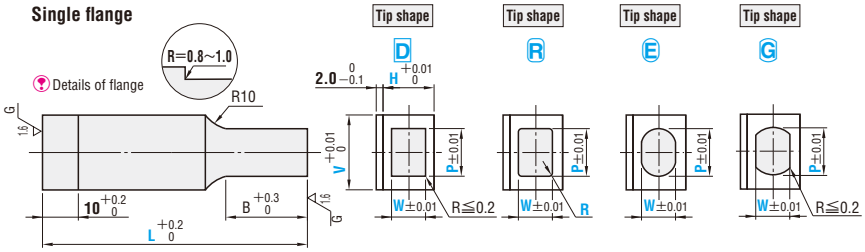
RoHS

Tip shape D	Tip shape R	Tip shape E	Tip shape G
W≦P≦W×20	W≦P≦W×20	W≦P≦W×20	W<P≦W×20
R=0 can be selected.	0.15≦R<W/2 (0.01mm increments)		

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.
The tip end is ground before the coating is applied.

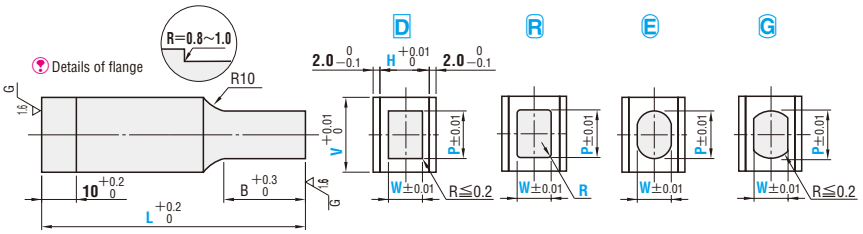
M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	H—AHSF	D, R	S
Powdered high-speed steel 64~67HRC	H—APHF	E, G	L
			Tip length (B) L>S

Single flange



M H	Catalog No. Type	Tip shape	B Tip length
SKH51 61~64HRC	H—AHSW	D, R	S
Powdered high-speed steel 64~67HRC	H—APHW	E, G	L
			Tip length (B) L>S

Double flanges



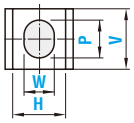
Catalog No. Type	Tip shape	B Tip length	H	V (Pmin.)	3	4	5	6	8	10	13	16	20	22	25	28	30	L	B S	B L
				Wmin.	1.5	2.0	2.5	3.0	3.0	4.0	5.0	7.0	8.0	9.0	10.0	12.0	12.0			
Single flange H—AHSF H—APHF / Double flanges H—AHSW H—APHW	D, R, E, G	S, L	(2)	1.0	○	○	○	○	○	○	○							50 60 70 80	6	8
			(3)	1.0	○	○	○	○	○	○	○	○	○	○						
			(4)	1.0		○	○	○	○	○	○	○	○	○						
			5	1.2			○	○	○	○	○	○	○	○	○	○	○		8	13
			6	1.5				○	○	○	○	○	○	○	○	○	○			
			8	2.0					○	○	○	○	○	○	○	○	○			
			10	2.5						○	○	○	○	○	○	○	○		13	19
			13	3.0							○	○	○	○	○	○	○			

H(2)(3)(4)···L50~70 If H dimension is (2), (3) or (4), full length L is within a range of 50~70.

Order

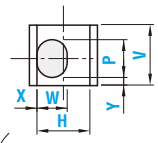
■The flange position is fixed.

(1) If tip is at center of shank



Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R (R only)
H—APHWES	08	08	—	60	—	P7.00	—	W6.00		

(2) If tip is not at center of shank



Catalog No.	V	H	—	L	—	0.01mm increments P	—	W	—	R (R only)	—	0.01mm increments X—Y
H—APHWEL	10	10	—	60	—	P6.00	—	W5.00			—	X0.00—Y0.10

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

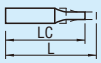
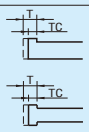
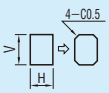
Days to Ship Quotation

Alterations

Catalog No. | V | H — L(LC) — P(PC)—W(WC)—R — X—Y — (BC·LKC, etc.)

H—APHFES 10 10 — LC58.5 — P8.00—W6.00 — HC1.5

Price Quotation

Alteration		Code	Spec.	1Code
Alterations to tip		PC WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments W(WC) / Bmax.: 0.50～0.99 / 4; 1.00～1.19 / 8; 1.20～1.99 / 13; 2.00～2.99 / 20; 3.00～4.99 / 30; 5.00～ / 35	
		BC	Tip length change 2≦BC≦Bmax. 0.1mm increments Full length (L) must be at least 36mm longer than tip length (BC).	
Alterations to full length		LC	Full length change 36+B(BC)≦LC<L 0.1mm increments (If combined with LKC, 0.01mm increments can be selected.) If difference between full length (LC) and tip length (B) is 36mm or less, tip length is adjusted to (Full length—36).	
		LKC	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	
Alterations to flange		HC	Flange width change 1.0≦HC<2.0 0.1mm increments	
		TC	Flange thickness change 5≦TC<10 0.1mm increments (If combined with TKC, 0.01mm increments can be selected.) Full length L is shortened by (10—TC). If combined with LC, full length is equal to LC.	Quotation
		RE	Flange R change R=0.8～1.0 ⇨ R≦0.3	
		FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
		TKC	Flange tolerance change T $^{+0.2}_{0}$ ⇨ $^{+0.02}_{0}$	
		TKM	Flange tolerance change T $^{+0.2}_{0}$ ⇨ $^{0}_{-0.02}$	
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. Chamfering of the flange base R portion is not performed.	
		VKC	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
		VKM	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
		VHM	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
		VHZ	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ ±0.005	

■Features

These block punches have greater flange strength than ordinary block punches. Use them for punching of heavy loads or high-tensile steels where punch flanges are prone to damage.

Comparison of flange dimensions Unit mm

Type	Thickness	Width	Base R
Ordinary type	5	1.5	0.3 or less
Flange thickness 10mm	10	2.0	0.8～1.0

BLOCK PUNCHES (FOR HEAVY LOAD)

—FLANGE THICKNESS 10mm・WPC® TREATMENT・HW COATING—

—WPC® treatment・HW coating—

S WPC® treatment HW coating
H 1000～1100HV 3000HV

Although the coating is applied to the B part, a thin coating film is formed also on the shank up to a length of approximately 10mm.

● Tip machining limit

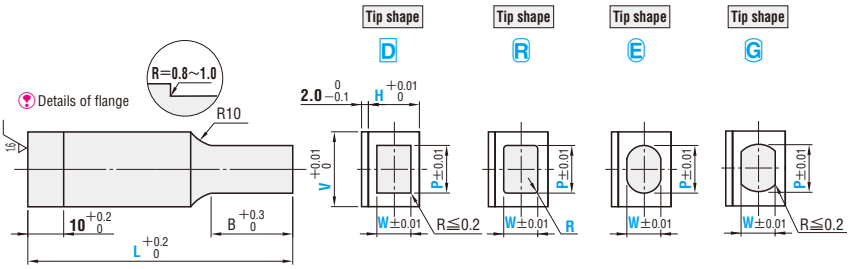
RoHS

Tip shape D	Tip shape R	Tip shape E	Tip shape G
W≦P≦W×20	W≦P≦W×20 0.15≦R<W/2 0.01mm increments	W≦P≦W×20	W<P≦W×20

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.
The tip edges are very slightly rounded.

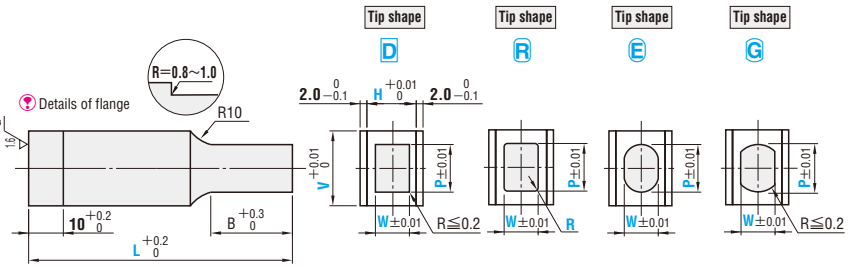
M H	Catalog No. Type	Tip shape	B Tip length
(H2～5) SKH51 61～64HRC Surface 1000～1100HV (H6～13) Equivalent to SKD11 60～63HRC Surface 1000～1100HV	WPC® treatment W—AHF	D R E G	S L Tip length (B) L>S
SKH51 61～64HRC Surface 1000～1100HV	WPC® treatment W—AHSF (H6～13)		
SKH51 61～64 HRC Surface 3000 HV	HW coating HW—AHSF		
Powdered high-speed steel 64～67HRC Surface 1000～1100HV	WPC® treatment W—APHF		
Powdered high-speed steel 64～67HRC Surface 3000HV	HW coating HW—APHF		

Single flange



M H	Catalog No. Type	Tip shape	B Tip length
(H2～5) SKH51 61～64HRC Surface 1000～1100HV (H6～13) Equivalent to SKD11 60～63HRC Surface 1000～1100HV	WPC® treatment W—AHW	D R E G	S L Tip length (B) L>S
SKH51 61～64HRC Surface 1000～1100HV	WPC® treatment W—AHSW (H6～13)		
SKH51 61～64 HRC Surface 3000 HV	HW coating HW—AHSW		
Powdered high-speed steel 64～67HRC Surface 1000～1100HV	WPC® treatment W—APHW		
Powdered high-speed steel 64～67HRC Surface 3000HV	HW coating HW—APHW		

Double flanges



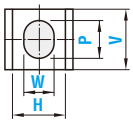
Catalog No. Type	Tip shape	B Tip length	H	Pmin. / Wmin.	V 3 (1.5)	4 (2.0)	5 (2.5)	6 (3.0)	8 (3.0)	10 (4.0)	13 (5.0)	16 (7.0)	20 (8.0)	22 (9.0)	25 (10.0)	28 (12.0)	30 (12.0)	L	B S	B L
Single flange WPC® treatment HW coating W—AHF W—AHSF HW—AHSF W—APHF HW—APHF Double flanges WPC® treatment HW coating W—AHW W—AHSW HW—AHSW W—APHW HW—APHW	D R E G	S L	(2)	1.0	○	○	○	○	○	○	○							50 60 70 80	6	8
			(3)	1.0	○	○	○	○	○	○	○	○	○	○						
			(4)	1.0		○	○	○	○	○	○	○	○	○						
			5	1.2			○	○	○	○	○	○	○	○	○	○	○		8	13
			6	1.5				○	○	○	○	○	○	○	○	○	○			
			8	2.0					○	○	○	○	○	○	○	○	○			
			10	2.5						○	○	○	○	○	○	○	○		13	19
			13	3.0							○	○	○	○	○	○	○			

H (2) (3) (4)···L50～70 If H dimension is (2), (3) or (4), full length L is within a range of 50～70.

Order

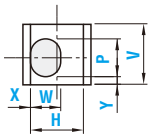
■The flange position is fixed.

(1) If tip is at center of shank



Catalog No.	V	H	—	L	—	0.01mm increments			
						P	—	W	— R(Ⓡ only)
W—AHWES	08	08	—	60	—	P7.00	—	W6.00	

(2) If tip is not at center of shank



Catalog No.	V	H	—	L	—	0.01mm increments				—	0.01mm increments
						P	—	W	— R(Ⓡ only)		X—Y
HW—APHWEL	10	10	—	60	—	P6.00	—	W5.00		—	X0.00—Y0.10

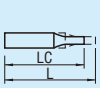
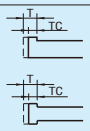
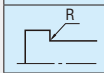
(X and Y must be set either to 0 or to 0.02 or more.
Tolerance±0.01)

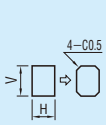
Days to Ship Quotation

Price Quotation

Alterations

Catalog No.	V	H	—	L(LC)	—	P(PC)–W(WC)–R	—	X–Y	—	(BC·PKC, etc.)
W—APHFES	10	10	—	LC58.5	—	P8.00–W6.00			—	HC1.5

Alteration		Code	Spec.	1Code
Alterations to tip		PC WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧0.50 0.01mm increments W (WC): 0.50~0.99 / 1.00~1.19 / 1.20~1.99 / 2.00~2.99 / 3.00~4.99 / 5.00~ Bmax.: 4 / 8 / 13 / 20 / 30 / 35	
		BC	Tip length change 2≦BC≦Bmax. 0.1mm increments (Full length (L) must be at least 36mm longer than tip length (BC).)	
Alterations to full length		LC	Full length change 36+B(BC)≦LC<L 0.1mm increments (If combined with LKC, 0.01mm increments can be selected.) (If difference between full length (LC) and tip length (B) is 36mm or less, tip length is adjusted to (Full length—36).)	
		LKC	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	Quotation
Alterations to flange		HC	Flange width change 1.0≦HC<2.0 0.1mm increments	
		TC	Flange thickness change 5≦TC<10 0.1mm increments (If combined with TKC, 0.01mm increments can be selected.) (Full length L is shortened by (10—TC). If combined with LC, full length is equal to LC.)	
		RE	Flange R change R=0.8~1.0⇨R≦0.3	
		FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
		TKC	Flange tolerance change T $^{+0.2}_{0}$ ⇨ $^{+0.02}_{0}$	
		TKM	Flange tolerance change T $^{+0.2}_{0}$ ⇨ $^{0}_{-0.02}$	

Alteration		Code	Spec.	1Code
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. (Chamfering of the flange base R portion is not performed.) Min. 0.5mm	Quotation
		VKC	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$	
		VKM	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.005}$	
		VHM	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ $^{0}_{-0.01}$	
		VHZ	Shank tolerance change V·H $^{+0.01}_{0}$ ⇨ ±0.005	

■Features

These block punches have greater flange strength than ordinary block punches. Use them for punching of heavy loads or high-tensile steels where punch flanges are prone to damage.

Comparison of flange dimensions Units: mm

Type	Thickness	Width	Base R
Ordinary type	5	1.5	0.3 or less
Flange thickness 10mm	10	2.0	0.8~1.0

BLOCK PUNCHES
—CONFIGURABLE SIZE・TiCN COATING—

—TiCN coating—

S TiCN
H 3000HV
Although the effective range of the coating is part B, an extremely thin coating film is formed also on the shank up to a length of approximately 10mm.

●Tip machining limit

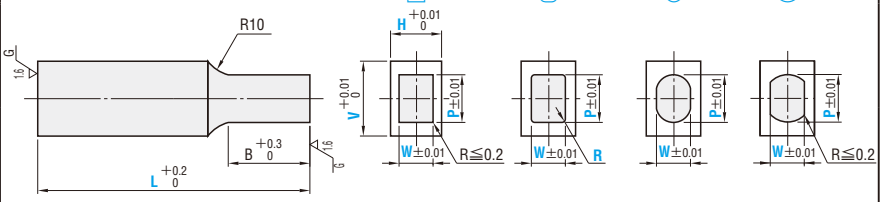
RoHS

Tip shape D	Tip shape R	Tip shape E	Tip shape G
W≦P≦W×20	W≦P≦W×20	W≦P≦W×20	W<P≦W×20
R=0 can be selected.	0.15≦R<W/2 (0.01mm increments)		

Even when P=V and W=H, the tip tolerance is determined by the P and W tolerances.
The tip end is ground before the coating is applied.

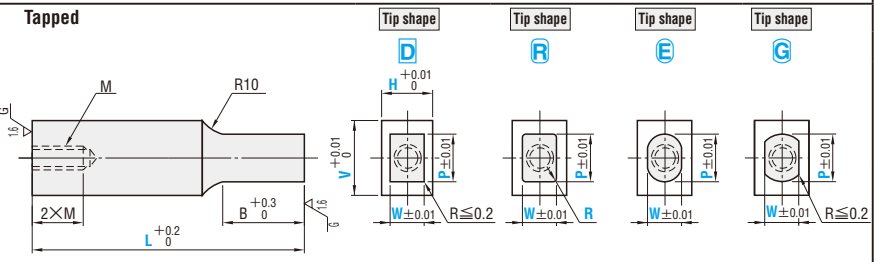
M / H	Shank dimensions V・H	Catalog No. Type	Tip shape
SKH51 61~64HRC	V3.0~30 H3.0~30	H—FHSP	D R E G
Powdered high-speed steel 64~67HRC	V3.0~30 H3.0~30	H—FPHP	D R E G

Normal



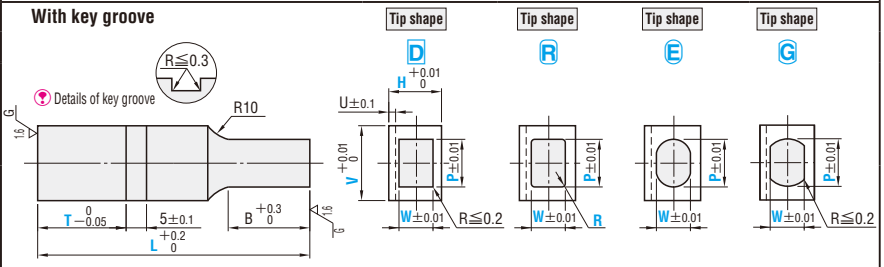
M / H	Shank dimensions V・H	Catalog No. Type	Tip shape
SKH51 61~64HRC	V5.1~30 H5.1~30	H—FHSM	D R E G
Powdered high-speed steel 64~67HRC	V5.1~30 H5.1~30	H—FPHM	D R E G

Tapped



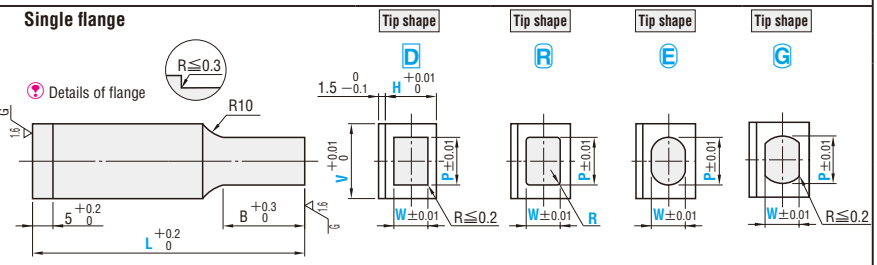
M / H	Shank dimensions V・H	Catalog No. Type	Tip shape
SKH51 61~64HRC	V3.0~30 H3.0~30	H—FHSK	D R E G
Powdered high-speed steel 64~67HRC	V3.0~30 H3.0~30	H—FPHK	D R E G

With key groove



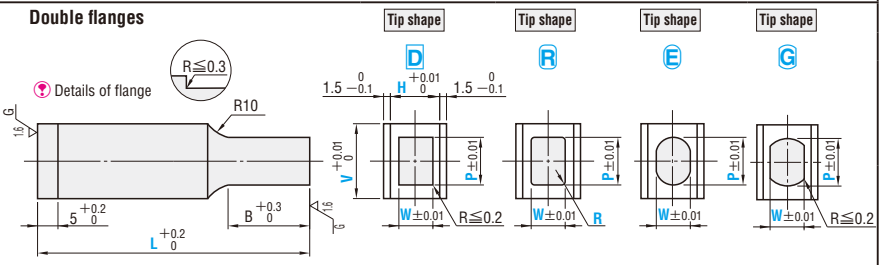
M / H	Shank dimensions V・H	Catalog No. Type	Tip shape
SKH51 61~64HRC	V3.0~30 H3.0~30	H—FHSF	D R E G
Powdered high-speed steel 64~67HRC	V3.0~30 H3.0~30	H—FPHF	D R E G

Single flange



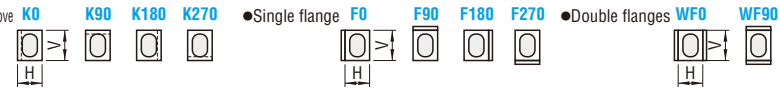
M / H	Shank dimensions V・H	Catalog No. Type	Tip shape
SKH51 61~64HRC	V3.0~30 H3.0~30	H—FHSW	D R E G
Powdered high-speed steel 64~67HRC	V3.0~25 H3.0~25	H—FPHW	D R E G

Double flanges



■Key groove position change
Flange position change

●With key groove K0 K90 K180 K270 ●Single flange F0 F90 F180 F270 ●Double flanges WF0 WF90

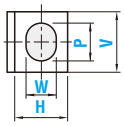


Catalog No. Type		Tip shape	H	Wmin.	Pmin.	V 3.0〜4.0	4.1〜5.0	5.1〜6.0	6.1〜8.0	8.1〜10.0	10.1〜13.0	13.1〜16.0	16.1〜20.0	20.1〜25.0	25.1〜30.0	L	0.1mm T	B	M	U
Normal	H—FHSP	D R E G	(3.0〜4.0)	2.0	1.0	○	○	○	○	○	○	○	○			(40) (50) 60 70 80 90 100	T≧2.0	8	—	1.0
	H—FPHP		4.1〜5.0	2.5	1.2		○	○	○	○	○	○	○	○	○			13	—	
Tapped	H—FHSM		5.1〜6.0	3.0	1.5			○	○	○	○	○	○	○	○				3	
	H—FPHM		6.1〜8.0	3.0	2.0				○	○	○	○	○	○	○				4	1.5
With key groove	H—FHSK		8.1〜10.0	3.0	2.5					○	○	○	○	○	○			19	5	
	H—FPHK		10.1〜13.0	4.0	3.0						○	○	○	○	○				6	
Single flange	H—FHSF		13.1〜16.0	5.0	4.0							○	○	○	○			25	8	
	H—FPHF		16.1〜20.0	5.0	5.0								○	○	○					
Double flanges	H—FHSW		20.1〜25.0	6.0	6.5									○	○					
	H—FPHW		(25.1〜30.0)	7.5	7.5										○					

- (40)・H8.1〜30…B=13 If full length is (40) and H dimension is 8.1〜30, tip length is 13mm in all cases. (For tapped types, the tip length is 10mm in all cases.)
- (50)・H13.1〜30…B=19 If full length is (50) and H dimension is 13.1〜30, tip length is 19mm in all cases.
- H (3.0〜4.0)…L40〜70 If H dimension is (3.0〜4.0), full length L is within a range of 40〜70.
- ⊗ H (25.1〜30.0) cannot be selected for double flanges types.

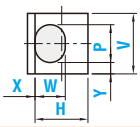
Order

(1) If tip is at center of shank



Catalog No.	0.1mm increments V	H	L	0.01mm increments P	W	R (R only)	0.1mm increments T≧2	K F WF
H—FHSPD	V23.5	H12.0	60	P18.00	W 4.00			
H—FHSMD	V17.0	H10.0	100	P16.00	W 9.00			
H—FPHKD	V 9.0	H 5.5	60	P 8.00	W 5.00		T25.5	KO
H—FPHFD	V17.0	H14.0	60	P15.00	W12.00			FO
H—FPHWD	V 9.5	H 6.0	40	P 8.00	W 5.00			WF90

(2) If tip is not at center of shank



Catalog No.	0.1mm increments V	H	L	0.01mm increments P	W	R (R only)	0.1mm increments T≧2	K F WF	0.01mm increments X—Y
H—FHSFE	V16.5	H14.0	50	P15.00	W12.00			FO	X0.00—Y0.50

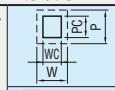
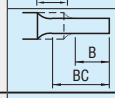
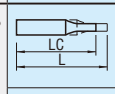
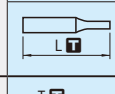
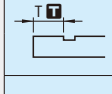
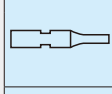
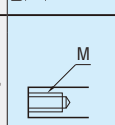
- X and Y must be set either to 0 or to 0.02 or more. Tolerance ±0.01

Days to Ship Quotation

Price Quotation

Alterations

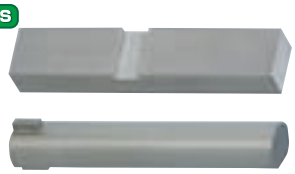
Catalog No. – V – H – L (LC) – P (PC)・W (WC) – T – K・F・WF – (BC・HC・TC, etc.)
H—FHSMD–V19.0–H7.9– 60.0 – P18.00–WC1.50 – VKC–MC3

Alteration		Code	Spec.	1Code
Alterations to tip		PC WC	Tip dimension change PC≧V×0.3≧1.00 WC≧H×0.15≧1.00 0.01mm increments (W (WC): 1.00〜1.19 → Bmax. 8; 1.20〜1.99 → 13; 2.00〜2.99 → 20; 3.00〜4.99 → 30; 5.00〜 → 35)	
		BC	Tip length depth change 2≦BC≦Bmax. 0.1mm increments. Full length (L) must be at least 30mm longer than tip length (BC).	
Alterations to full length		LC	Full length change 30+B (BC)≦LC<L 0.1mm increments (If combined with LKC, 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).	Quotation
		LKC	Full length tolerance change L +0.2 0 ⇨ +0.05 0	
Key groove		TKC	Key groove position tolerance change T 0 −0.05 ⇨ 0 −0.02	
		RTC	Key groove position tolerance change T 0 −0.05 ⇨ +0.05 0	
		WK	Addition of key groove at symmetrically opposite position K0・180 K90・270 H−(2×U (UK))≧2.0 (K0, K180) V−(2×U (UK))≧2.0 (K90, K270) An additional key groove is added at a position symmetrically opposite to the specified key groove. Can be used for key groove types. Can be combined with UK.	
		UK	Key groove depth change 0.5≦UK≦U+0.2 0.1mm increments H (V) −UK≧2.0 Can be used for key groove types. Can be combined with WK.	
Tap		MC	Tap diameter change (H dimension: 6.1〜8.0 → M4 (Standard type) → M3; 8.1〜10.0 → M5 → M4・M6; 10.1〜13.0 → M6 → M4 (V10.1〜16.0) M5・M8; 13.1〜16.0 → M8 → M5 (V13.1〜20.0) M6・M10; 16.1〜30.0 → M8 → M6・M10) When ordering, select the tap diameter by specifying the number which follows MC. (Refer to order example.)	

Alteration		Code	Spec.	1Code
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, 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 tolerance change T +0.2 0 ⇨ +0.02 0	
		TKM	Flange tolerance change T +0.2 0 ⇨ 0 −0.02	
		FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
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. (Min. 0.5mm)	Quotation
		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≧1.3 Tip corner. Selection of chamfering position: CCP0 CCP90 CCP180 CCP270. Can be used for normal and tapped types only.	
		VKC	Shank tolerance change V・H +0.01 0 ⇨ +0.005 0	
		VKM	Shank tolerance change V・H +0.01 0 ⇨ 0 −0.005	
		VHM	Shank tolerance change V・H +0.01 0 ⇨ 0 −0.01	
		VHZ	Shank tolerance change V・H +0.01 0 ⇨ ±0.005	
		DC	Addition of press-in lead Press-in lead of 3mm (V・H −0.01 −0.03) is added. Can be used for normal, tapped, and key groove types.	

STRAIGHT PUNCHES

RoHS

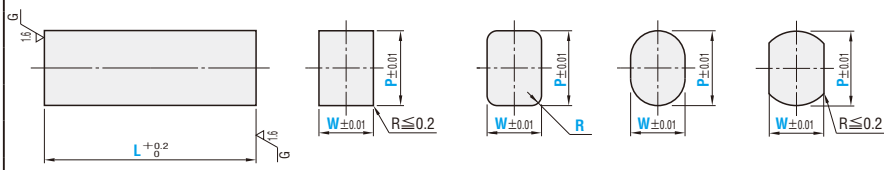


● Tip machining limit

Tip shape			
D	W≦P R=0 can be selected.		
R	W≦P 0.15≦R<W/2 W−2R≧1 0.01mm increments		
E	W<P	P≦10	P−W≧1
		10<P≦20	P−W≧2
		20<P≦30	P−W≧3
G	W<P	P≦10	P−W≧1
		10<P≦20	P−W≧2
		20<P≦30	P−W≧3

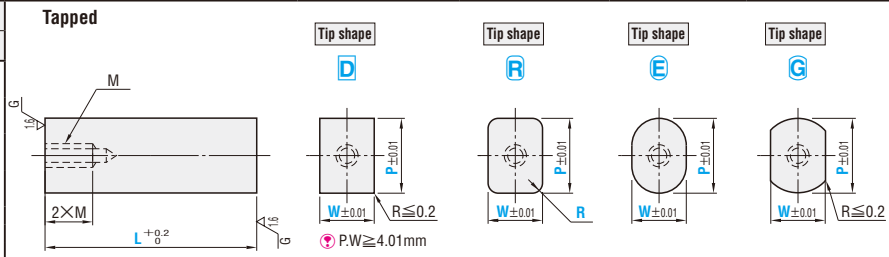
Straight

M H	P·W	Catalog No. Type	Tip shape
(W2.00~5.00) SKH51 61~64HRC (W5.01~30.00) Equivalent to SKD11 60~63HRC	P2.00~50.00	HPC	D
	W2.00~30.00		
SKH51 61~64HRC	P5.01~30.00	HSPC	R
	W5.01~30.00		E
Powdered high-speed steel 64~67HRC	P2.00~30.00	PHPC	G
	W2.00~30.00		



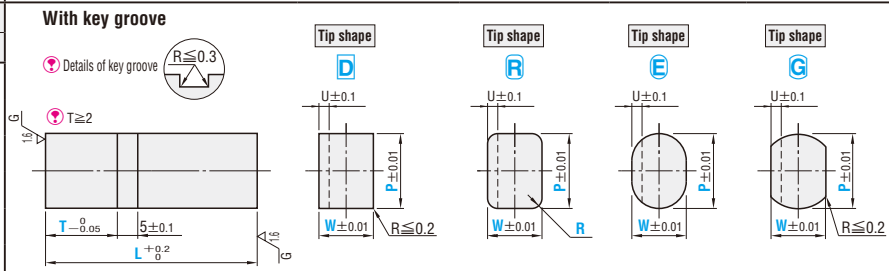
Tapped

M H	P·W	Catalog No. Type	Tip shape
(W2.00~5.00) SKH51 61~64HRC (W5.01~30.00) Equivalent to SKD11 60~63HRC	P4.01~50.00	HMC	D
	W4.01~30.00		
SKH51 61~64HRC	P5.01~30.00	HSMC	R
	W5.01~30.00		E
Powdered high-speed steel 64~67HRC	P4.01~30.00	PHMC	G
	W4.01~30.00		



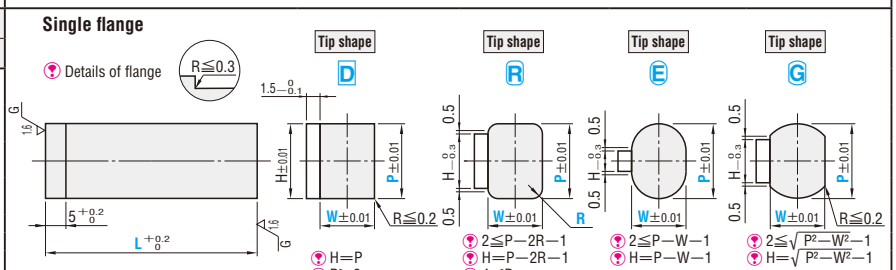
With key groove

M H	P·W	Catalog No. Type	Tip shape
(W2.00~5.00) SKH51 61~64HRC (W5.01~30.00) Equivalent to SKD11 60~63HRC	P2.00~50.00	HKC	D
	W2.00~30.00		
SKH51 61~64HRC	P5.01~30.00	HSKC	R
	W5.01~30.00		E
Powdered high-speed steel 64~67HRC	P2.00~30.00	PHKC	G
	W2.00~30.00		



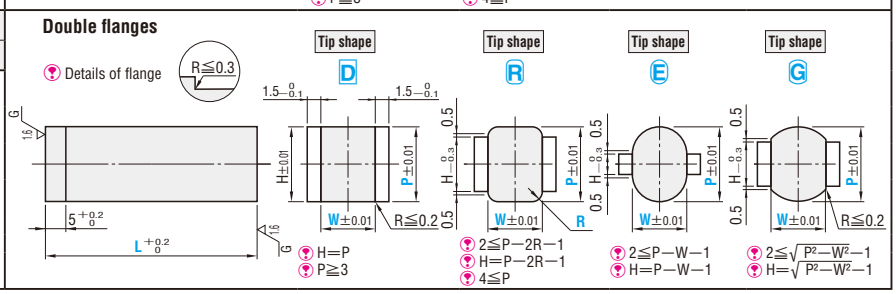
Single flange

M H	P·W	Catalog No. Type	Tip shape
(W2.00~5.00) SKH51 61~64HRC (W5.01~30.00) Equivalent to SKD11 60~63HRC	P3.00~50.00	HFC	D
	W2.00~30.00		
SKH51 61~64HRC	P5.01~30.00	HSFC	R
	W5.01~30.00		E
Powdered high-speed steel 64~67HRC	P3.00~30.00	PHFC	G
	W2.00~30.00		



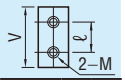
Double flanges

M H	P·W	Catalog No. Type	Tip shape
(W2.00~5.00) SKH51 61~64HRC (W5.01~30.00) Equivalent to SKD11 60~63HRC	P3.00~50.00	HWC	D
	W2.00~30.00		
SKH51 61~64HRC	P5.01~30.00	HSWC	R
	W5.01~30.00		E
Powdered high-speed steel 64~67HRC	P3.00~30.00	PHWC	G
	W2.00~30.00		

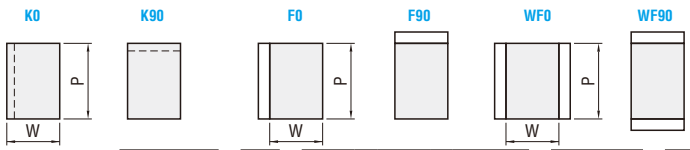


Catalog No. Type	Tip shape	L	W \ P	(2.00)〜(2.99)	3.00〜5.00	5.01〜10.00	10.01〜15.00	15.01〜20.00	20.01〜25.00	25.01〜30.00	(30.01)〜(40.00)	(40.01)〜(50.00)	0.1mm T	M	U
Straight: HPC, HSPC, PHPC; Single flange: HFC, HSFC, PHFC; Tapped: HMC, HSMC, PHMC; Double flanges: HWC, HSWC, PHWC; With key groove: HKC, HSKC, PHKC	D, R, E, G	13, 16, 20, 25 (P.357); 40, 50, 60, 70, (80), (90), (100)	2.00〜2.99	○	○	○	○						T≧2	—	1.0
			3.00〜4.00		○	○	○	○							
			4.01〜5.00		○	○	○	○	○	○				3	
			5.01〜6.00			○	○	○	○	○				4	
			6.01〜8.00			○	○	○	○	○	○			5	1.5
			8.01〜10.00			○	○	○	○	○	○	○		6	
			10.01〜15.00				○	○	○	○	○	○		8	
			15.01〜20.00					○	○	○	○	○			
			20.01〜25.00						○	○	○	○			
			25.01〜30.00							○	○	○			

- L(80)(90)(100) ⇢W4.01〜30.00 If L(80)(90)(100), then select W within the range of 4.01〜30.00
- For L13〜25, refer to the short straight punches. However, only D shape (tapped・flange type) is available. P.357
- HS□C□(SKH51) can be used for sizes W>5.
- For flange types with W2.00〜2.99, P≦13.00 and L≦60.
- For the flange type R shape, P≧4.
- P2.00〜2.99 is a specification available for the straight and key groove types only.
- P(30.01〜40.00)・(40.01〜50.00) is a specification available for H□CD (SKD11, D shape) only.
- For P30.01〜40.00, there are 2 tap holes with a pitch of 20mm. (Figure at right)
- For P40.01〜50.00, there are 2 tap holes with a pitch of 24mm. (Figure at right)



■Key groove position specified ■Flange position specified



- Tip shape E Can be selected for F0・WF0 only.
- For F90 or WF90, H dimension is as shown below.

Tip shape D : H=W

Tip shape R : 2≦W−2R−1
H=W−2R−1

Order

Catalog No. — L — 0.01mm increments: P — W — R (R only) — 0.1mm increments: T≧2 — K・F・WF

PHPCD — 60 — P14.28 — W9.28
HMCD — 80 — P 5.80 — W5.20
PHKCR — 60 — P14.28 — W9.28 — R0.50 — T25.5 — K0

Days to Ship Quotation

Price Quotation

Alterations

Catalog No. — L (LC) — P — W — R — T — K — (MC・PKC, etc.)
PHPCD — LC65.5 — P5.80 — W5.20 — PKC

Alteration	Code	Spec.	1Code
Alterations to tip	PKC	Tip tolerance change P・W±0.01 ⇨ +0.01 / 0	
	PKV	Tip tolerance change P・W±0.01 ⇨ ±0.005	
Alterations to full length	LC	Full length change 20≦LC<L (For tapped type, 30≦LC<L) 0.1mm increments (If combined with LKC・LKZ, 0.01 mm increments can be selected.)	Quotation
	LKC	Full length tolerance change L +0.2 / 0 ⇨ +0.05 / 0	
	LKZ	Full length tolerance change L +0.2 / 0 ⇨ +0.01 / 0	
Alterations to tap	MC (MMC)	Tap diameter change MMC can be used for material equivalent to SKD11 only. To change the tap diameter, specify MMC.	

W \ P	5.01〜20.00
5.01〜6.00	M4→M3
6.01〜8.00	M5→M4
8.01〜10.00	M6→M5・M4
10.01〜13.00	M8→M6・M5

Alteration	Code	Spec.	1Code
Key groove	TKC	Key groove position tolerance change T 0 / −0.05 ⇨ 0 / −0.02	
	RTC	Key groove position tolerance change T 0 / −0.05 ⇨ +0.05 / 0	
	WK	Addition of key groove at symmetrically opposite position W−{2×U(UK)}≧2.0 (K0) P−{2×U(UK)}≧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≦UK≦U+0.2 0.1mm increments P(W)−UK≧2.0 Can be combined with WK. Can be used for key groove types.	
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, 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 ⇨ +0.02 / 0	
	TKM	Flange thickness tolerance change T +0.2 / 0 ⇨ 0 / −0.02	
	FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
Shape	CCN	Chamfering to shank (4 positions) 5≦CCN≦L 1mm increments (if CCN=L, 0.1mm increments) Can be used for tip D shape only. Cannot be used for tapped types with P・W−M<2. Flange side of flanged punch becomes CCN−T(TC).	

JECTOR STRAIGHT PUNCHES

RoHS

Details of jector hole P.391

●Tip machining limit

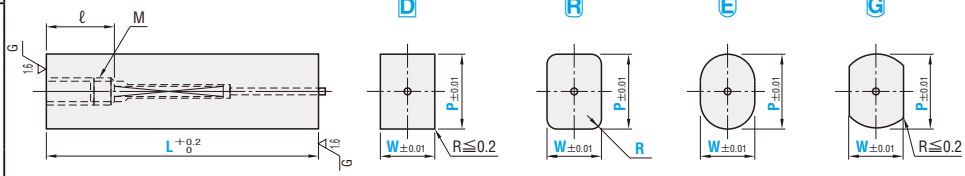
Tip shape D	Tip shape R	Tip shape E	Tip shape G
W≦P	W≦P	W<P	W<P
R=0 can be selected.	0.15≦R<W/2		
	W−2R≧1		
	0.01mm increments		

P≦10	P−W≧1
10<P≦20	P−W≧2
20<P≦30	P−W≧3

P≦10	P−W≧1
10<P≦20	P−W≧2
20<P≦30	P−W≧3

M H	Catalog No. Type	Tip shape
Equivalent to SKD11 60～63HRC	HJMC	R E G
SKH51 61～64HRC	HSJMC	R E G
Powdered high-speed steel 64～67HRC	PHJMC	R E G

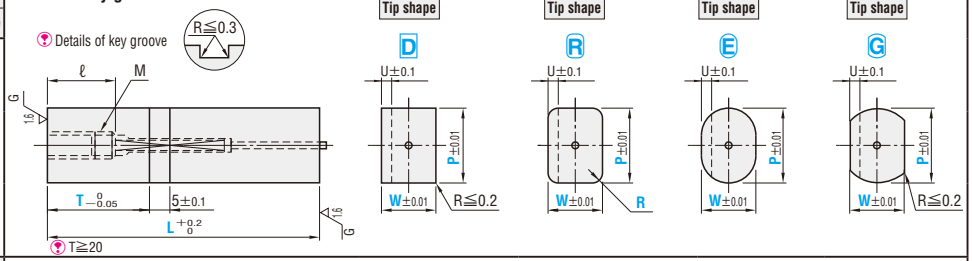
Tapped



M H	Catalog No. Type	Tip shape
Equivalent to SKD11 60～63HRC	HJKC	R E G
SKH51 61～64HRC	HSJKC	R E G
Powdered high-speed steel 64～67HRC	PHJKC	R E G

With key groove

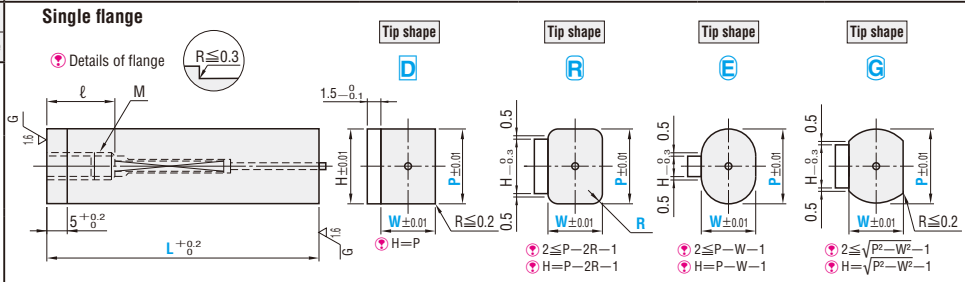
Details of key groove



M H	Catalog No. Type	Tip shape
Equivalent to SKD11 60～63HRC	HJFC	R E G
SKH51 61～64HRC	HSJFC	R E G
Powdered high-speed steel 64～67HRC	PHJFC	R E G

Single flange

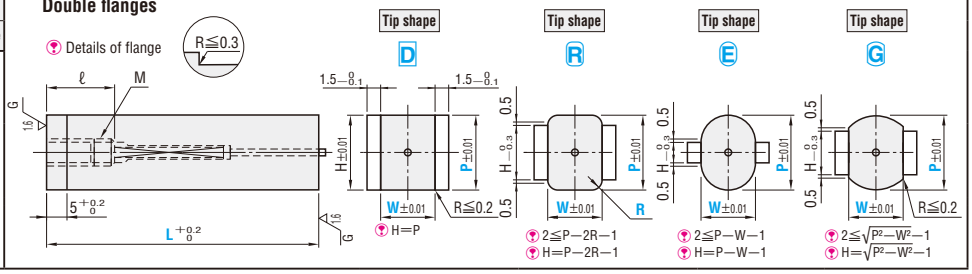
Details of flange



M H	Catalog No. Type	Tip shape
Equivalent to SKD11 60～63HRC	HJWC	R E G
SKH51 61～64HRC	HSJWC	R E G
Powdered high-speed steel 64～67HRC	PHJWC	R E G

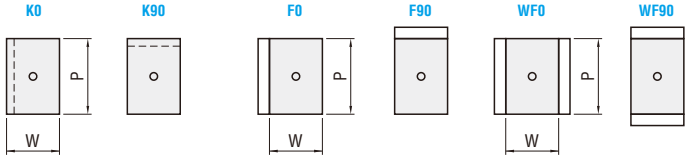
Double flanges

Details of flange



Catalog No. Type		Tip shape	L	W \ P	5.00 ~ 10.00	10.01 ~ 15.00	15.01 ~ 20.00	20.01 ~ 25.00	25.01 ~ 30.00	0.1mm increments T	M	ℓ	U
Tapped	Single flange			5.00～ 6.00	○	○	○	○	○		4		1.0
HJMC	HJFC		40	6.01～ 8.00	○	○	○	○	○		5		
HSJMC	HSJFC	Ⓡ	50	8.01～ 10.00	○	○	○	○	○		6		1.5
PHJMC	PHJFC		60	10.01～ 15.00		○	○	○	○	T≧20		12	
With key groove	Double flanges	Ⓔ	70	15.01～ 20.00			○	○	○		8		
HJKC	HJWC												
HSJKC	HSJWC	Ⓖ	80	20.01～ 25.00				○	○				
PHJKC	PHJWC												

■Key groove position specified ■Flange position specified



Tip shape Ⓔ Ⓖ Can be selected for F0・WF0 only.

For F90 or WF90, H dimension is as shown below.

Tip shape : H=W

Tip shape Ⓡ: 2≦W−2R−1
H=W−2R−1

Order

Catalog No.	—	L	—	0.01mm increments P	—	W	—	R (Ⓡ only)	—	0.1mm increments T≧20	—	K・F・WF
HJKCD	—	80	—	P15.00	—	W7.25			—	T28.5	—	K0

Days to Ship Quotation

Price Quotation

Alterations

Catalog No.	—	L (LC)	—	P	—	W	—	R	—	T — K	—	(PKC, etc.)
HJKCE	—	LC65.5	—	P6.00	—	W5.00			—	T28.5—K0	—	PKC

	Alteration	Code	Spec.	1Code
Alterations to tip		PKC	Tip tolerance change P・W±0.01 ⇨ $^{+0.01}_{0}$	Quotation
		PKV	Tip tolerance change P・W±0.01 ⇨ ±0.005	
Alterations to full length		LC	Full length change 30≦LC<L 0.1mm increments (If combined with LKC・LKZ, 0.01mm increments can be selected.)	
		LKC	Full length tolerance change L $^{+0.3}_{0}$ ⇨ $^{+0.05}_{0}$	
		LKZ	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.01}_{0}$	
Alterations to key groove		TKC	Key groove position tolerance change T $^{0}_{-0.05}$ ⇨ $^{0}_{-0.02}$	
		RTC	Key groove position tolerance change T $^{0}_{-0.05}$ ⇨ $^{+0.05}_{0}$	
		UK	Key groove depth change ⓟ Can be used for key groove types. 0.5≦UK≦U+0.2 0.1mm increments Can be used for W−UK≧10 (K0) P−UK≧10 (K90).	

	Alteration	Code	Spec.	1Code
Alterations to flange		HC	Flange width change 0≦HC<1.5 0.1mm increments	Quotation
		TC	Flange thickness change 3.5≦TC<5 0.1mm increments (If combined with TKC, 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 $^{+0.2}_{0}$ ⇨ $^{+0.02}_{0}$	
		TKM	Flange thickness tolerance change T $^{+0.2}_{0}$ ⇨ $^{0}_{-0.01}$	
		FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
Alterations to shape		JVC	Change of spring to reinforced type ⓟ 6.01≦W≦25.00…Can be used for L≧60. ⊗ Cannot be used for W≦6.00.	
		AC	AIR The jector pin is removed to create an air path and the side vent hole is plugged from the inside by inserting a resin (ABS) ring.	
		NC	The jector pin is removed. ⊗ Cannot be combined with AC.	
		CCN	Chamfering to shank (4 positions) 5≦CCN≦L 1mm increments ⓟ Can be used for tip D shape only. ⊗ Cannot be used for tapped types with P・W−M<2. ⓟ Flange side of flanged punch becomes CCN−T (TC).	

STRAIGHT PUNCHES
—TiCN COATING—

—TiCN coating—

S TiCN
H 3000HV
The effective coating range is part B, however an extremely thin coating film is also formed on part S (approximately 10 mm).
The P and W dimensions of the uncoated parts are reduced by an amount equivalent to the coating thickness (6 ~ 10 microns).
The tip end is ground before the coating is applied.

●Tip machining limit

Tip shape D
W≦P
R=0 can be selected.

Tip shape R
W≦P
0.15≦R<W/2
W−2R≧1
0.01mm increments

Tip shape E
W<P

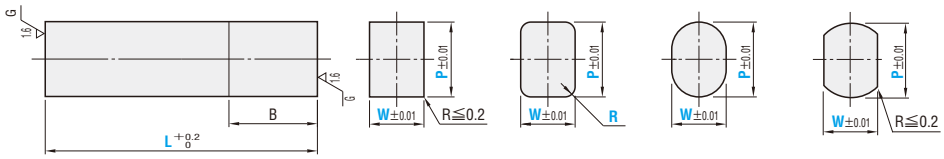
P≦10	P−W≧1
10<P≦20	P−W≧2
20<P≦30	P−W≧3

Tip shape G RoHS
W<P

P≦10	P−W≧1
10<P≦20	P−W≧2
20<P≦30	P−W≧3

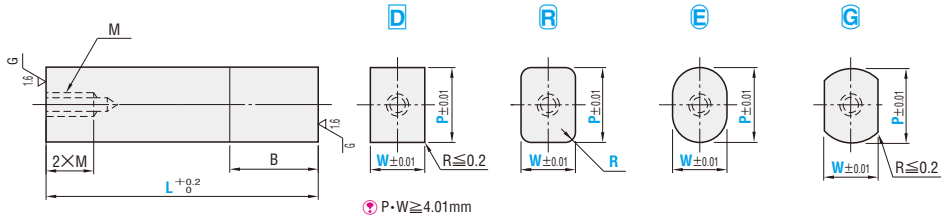
Straight

M H	Catalog No. Type	Tip shape
SKH51 61~64HRC	H−HSPC	D R E G
Powdered high-speed steel 64~67HRC	H−PHPC	D R E G



Tapped

M H	Catalog No. Type	Tip shape
SKH51 61~64HRC	H−HSMC	D R E G
Powdered high-speed steel 64~67HRC	H−PHMC	D R E G



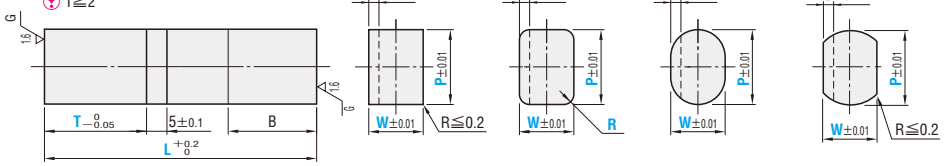
P·W≧4.01mm

With key groove

M H	Catalog No. Type	Tip shape
SKH51 61~64HRC	H−HSKC	D R E G
Powdered high-speed steel 64~67HRC	H−PHKC	D R E G

Details of key groove

T≧2



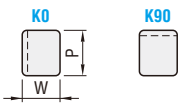
Catalog No. Type	Tip shape	L	W \ P	2.00 ~ 5.00	5.01 ~ 10.00	10.01 ~ 15.00	15.01 ~ 20.00	20.01 ~ 25.00	25.01 ~ 30.00	0.1mm increments T	M	U	B
Straight H−HSPC H−PHPC	D R E G	40	2.00 ~ 3.00	○	○	○				T≧2.0	—	1.0	15
		50	3.01 ~ 4.00	○	○	○	○						
		60	4.01 ~ 5.00	○	○	○	○	○			3		
Tapped H−HSMC H−PHMC		70	5.01 ~ 6.00		○	○	○	○	○		4		
		(80)	6.01 ~ 8.00		○	○	○	○	○		5	1.5	
		(90)	8.01 ~ 10.00		○	○	○	○	○		6		
With key groove H−HSKC H−PHKC		(100)	10.01 ~ 15.00			○	○	○	○		8		
			15.01 ~ 20.00				○	○	○				
			20.01 ~ 25.00					○	○				
			25.01 ~ 30.00						○				

For tapped types, P·W≧4.01 L(80)(90)(100)···W4.01~30.00 For L(80)(90)(100), select W within the range of 4.01 ~ 30.00.

Order

Catalog No.	—	L	—	0.01mm increments P	—	W	—	R (Ⓡ only)	—	0.1mm increments T≧2	—	K
H−PHPCD	—	60	—	P14.28	—	W9.28						
H−HSMCD	—	80	—	P5.80	—	W5.20						
H−PHKCR	—	60	—	P14.28	—	W9.28	—	R0.15	—	T25.5	—	K0

■Key groove position specified



Days to Ship Quotation

Alterations

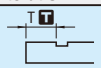
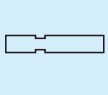
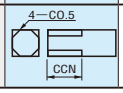
Catalog No. — L(LC) — P — W — R — T — K — (LKC・TKC・RTC, etc.)

H—PHPCD — LC65.5 — P5.80 — W5.20 — LKC

	Alteration	Code	Spec.	1Code
Alterations to full length		LC	Full length change 30≦LC<L 0.1mm increments (If combined with LKC, 0.01mm increments can be selected.)	Quotation
		LKC	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	
Alterations to tap		MC	Tap diameter change W \ P: 5.01~20.00 5.01~ 6.00: M4→M3 6.01~ 8.00: M5→M4 8.01~10.00: M6→M5 10.01~13.00: M8→M6	

Price

Quotation

	Alteration	Code	Spec.	1Code
Alterations to key groove		TKC	Key groove position tolerance change T $^{0}_{-0.05}$ ⇨ $^{0}_{-0.02}$	Quotation
		RTC	Key groove position tolerance change T $^{0}_{-0.05}$ ⇨ $^{+0.05}_{0}$	
		WK	Addition of key groove at symmetrically opposite position W— {2×U(UK)} ≧2.0(K0) P— {2×U(UK)} ≧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≦UK≦U+0.2 0.1mm increments P(W)—UK≧2.00 Can be combined with WK. Can be used for key groove types.	
Alterations to shape		CCN	Chamfering of shank (4 locations) 5≦CCN≦L 1mm increments Can be used for tip D shape only. Cannot be used for tapped types with P・W—M<2.	

JECTOR STRAIGHT PUNCHES
—TiCN COATING—

—TiCN coating—

RoHS

S TiCN
H 3000HV

- The effective coating range is part B, however an extremely thin coating film is also formed on part S (approximately 10 mm).
- The P and W dimensions of the uncoated parts are reduced by an amount equivalent to the coating thickness (6~10 microns).
- Details of jector hole P.361

● Tip machining limit

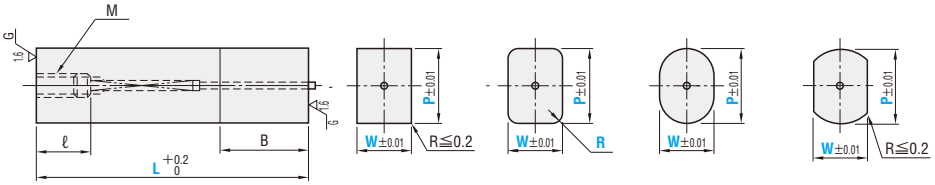
Tip shape D	Tip shape R	Tip shape E	Tip shape G
W≦P R=0 can be selected.	W≦P 0.15≦R<W/2 W−2R≧1 0.01mm increments	W<P	W<P

P≦10	P−W≧1
10<P≦20	P−W≧2
20<P≦30	P−W≧3

P≦10	P−W≧1
10<P≦20	P−W≧2
20<P≦30	P−W≧3

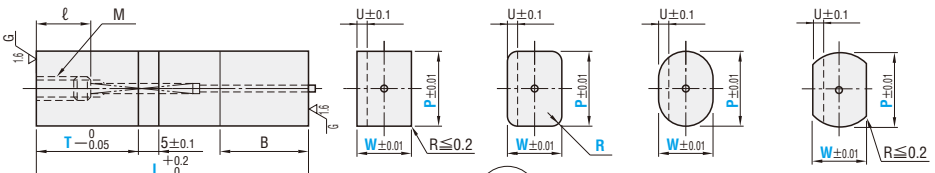
Tapped

M / H	Catalog No. Type	Tip shape
SKH51 61~64HRC	H−HSJMC	D R E G
Powdered high-speed steel 64~67HRC	H−PHJMC	D R E G



With key groove

M / H	Catalog No. Type	Tip shape
SKH51 61~64HRC	H−HSJKC	D R E G
Powdered high-speed steel 64~67HRC	H−PHJKC	D R E G



- T≧20
- Details of key groove

Catalog No. Type	Tip shape	L	W \ P	5.00~10.00	10.01~15.00	15.01~20.00	20.01~25.00	25.01~30.00	0.1mm increments T	M	ℓ	U	B
Tapped H−HSJMC, H−PHJMC	D R E G	40	5.00~6.00	○	○	○	○	○	T≧20.0	4	12	1.0	15
		50	6.01~8.00	○	○	○	○	○		5			
		60	8.01~10.00	○	○	○	○	○		6		1.5	
With key groove H−HSJKC, H−PHJKC		70	10.01~15.00		○	○	○	○		8			
		80	15.01~20.00			○	○	○					
			20.01~25.00				○	○					

Order

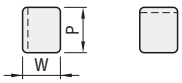
Catalog No.	—	L	—	P	—	W	—	R (Ⓡ only)	—	T≧20mm	—	K
H−HSJKCD	—	80	—	P15.00	—	W7.25	—		—	T28.5	—	K0

0.01mm increments
0.1mm increments

Days to Ship **Quotation**

■ Key groove position specified

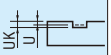
K0 K90

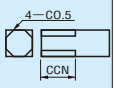
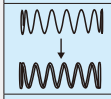
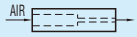
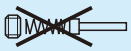


Alterations

Catalog No. — L(LC) — P — W — R — T — K — (LKC・TKC・RTC, etc.)

H—HSJKCE — LC65.5 — P6.80 — W5.00 — T28.5 — K0 — LKC

	Alteration	Code	Spec.	1Code
Alterations to full length		LC	Full length change 30≦LC<L 0.1 mm increments (If combined with LKC, 0.01 mm increments can be selected.) B is shortened by (L—LC).	Quotation
		LKC	Full length tolerance change L $^{+0.2}_{0}$ ⇨ $^{+0.05}_{0}$	
Alterations to key groove		TKC	Key groove position tolerance change T $^{0}_{-0.05}$ ⇨ $^{0}_{-0.02}$	
		RTC	Key groove position tolerance change T $^{0}_{-0.05}$ ⇨ $^{+0.05}_{0}$	
		UK	Key groove depth change 0.5≦UK≦U+0.2 0.1mm increments Can be used for P≧10 (K0) W≧10 (K90). Can be used for key groove types.	

	Alteration	Code	Spec.	1Code
Alterations to shape		CCN	Chamfering of shank (4 locations) 5≦CCN≦L 1mm increments Can be used for tip D shape only . Cannot be used for P・W—M<2.	Quotation
		JVC	Change of spring to reinforced type 6.01≦W≦25.00…Can be used for L≧60. Cannot be used for W≦6.00.	
		AC	 The jector pin is removed to create an air path and the side vent hole is plugged from the inside by inserting a resin (ABS) ring.	
		NC	 The jector pin is removed. Cannot be combined with AC.	

Price

Quotation

SHORT STRAIGHT PUNCHES

M / H	Catalog No.		
	Tapped	Single flange	Double flanges
Equivalent to SKD11 60～63HRC	HMCDS	HFCDS	HWCDS
Powdered high-speed steel 64～67HRC	PHMCDS	PHFCDS	PHWCDS

RoHS

● Tip machining limit

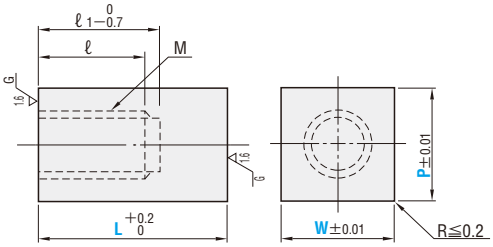
Tip shape

D

W≦P
R=0 can be selected.

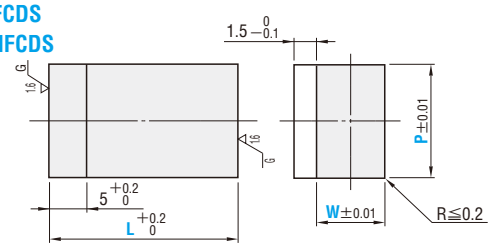
Tapped

HMCDS
PHMCDS



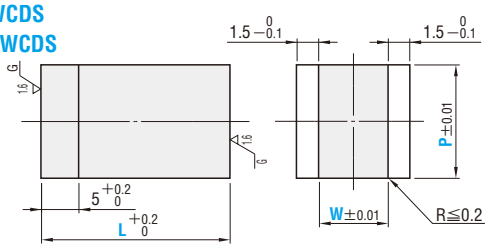
Single flange

HFCDS
PHFCDS



Double flanges

HWCDS
PHWCDS



Details of flange

■ Flange position specified

Catalog No.		L	W \ P	5.01～6.00	6.01～8.00	8.01～10.00	10.01～13.00	13.01～16.00	16.01～20.00	M	ℓ	ℓ1
Tapped	HMCDS	(13)	5.01～ 6.00	○	○	○	○	○	○	4	6	8.5
	PHMCDS	(16)	6.01～ 8.00		○	○	○	○	○	5	7.5	10.0
Single flange	HFCDS	20	8.01～ 10.00			○	○	○	○	6	9	12.5
	PHFCDS	25	10.01～ 13.00				○	○	○	8	12	15.5
Double flanges	HWCDS		13.01～ 16.00					○	○			
	PHWCDS		16.01～ 20.00						○			

Tapped (HMCDS・PHMCDS)
● L(13)…L13 is a specification available for W5.01～W8.00 only.
● L(16)…L16 is a specification available for W5.01～W10.00 only.

Order

Catalog No.	—	L	—	0.01mm increments P	—	W	—	F・WF
HMCDS	—	16	—	P9.51	—	W6.22		

Days to Ship Quotation

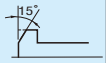
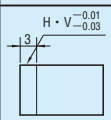
■Features

1. These are short type straight punches which can be installed onto the stripper plate.
2. The tapped types feature tap lengths and pilot hole lengths that are shorter than conventional types.

Alterations

Catalog No.	—	L(LC)	—	P	—	W	—	F·WF	—	(HC·TC·TKC, etc.)
HFCDS	—	LC21.5	—	P10.50	—	W8.50	—	F0	—	TC2.5

	Alteration	Code	Spec.	1Code
Alterations to tip		PKC	Tip tolerance change P·W±0.01⇨$^{+0.01}_{0}$	
		PKV	Tip tolerance change P·W±0.01⇨±0.005	
Alterations to full length		LC	Full length change 0.1mm increments 13<LC<25 (If combined with LKC·LKZ, 0.01mm increments can be selected.) The LC ranges for tapped types (HMCDS·PHMCDS) are shown below. W / LC range 5.01～ 8.00 / 13<LC<25 8.01～10.00 / 16<LC<25 10.01～20.00 / 20<LC<25	Quotation
		LKC	Full length tolerance change L $^{+0.2}_{0}$⇨$^{+0.05}_{0}$	
		LKZ	Full length tolerance change L $^{+0.2}_{0}$⇨$^{+0.01}_{0}$	
Alterations to tap		MC	Tap diameter change W \ P / 5.01～20.00 5.01～ 6.00 / M4 →M3 6.01～ 8.00 / M5 →M4 8.01～10.00 / M6 →M5 10.01～13.00 / M8 →M6 ⊗ Cannot be used for W≧13.01.	

	Alteration	Code	Spec.	1Code
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, 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 tolerance change T $^{+0.2}_{0}$⇨$^{+0.02}_{0}$	Quotation
		TKM	Flange tolerance change T $^{+0.2}_{0}$⇨$^{0}_{-0.02}$	
		FK	Relief chamfering to flange top edge Flange edge is chamfered to prevent flange breakage.	
Alterations to shape		DC	Addition of press-in lead Press-in lead of 3mm (H·V $^{-0.01}_{-0.03}$) is added. ⊗ Cannot be used for flange types.	

Price

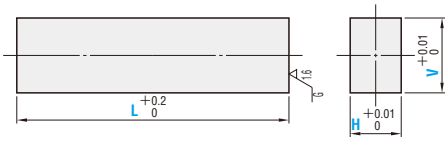
Quotation

BLOCK PUNCH BLANKS

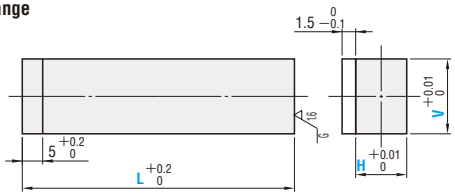
M / H		Catalog No. Normal	Tapped	With key groove	Single flange	Double flanges	Flange stopper
H3～ 5	SKH51 61～64HRC	HPB	HMB	HKB	HFB	HWB	HTB
H6～ 30	Equivalent to SKD11 60～63HRC						
H3～ 30	Powdered high-speed steel 64～67HRC	PHPB	PHMB	PHKB	PHFB	PHWB	PHTB

RoHS

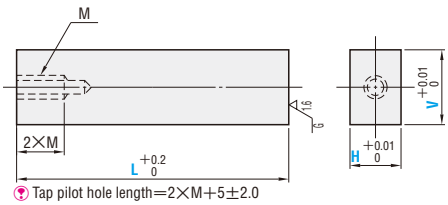
Normal
HPB
PHPB



Single flange
HFB
PHFB

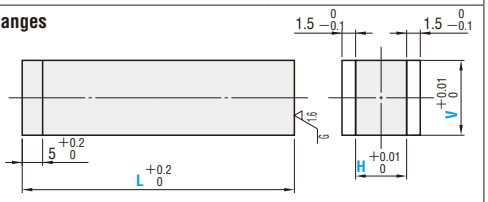


Tapped
HMB
PHMB

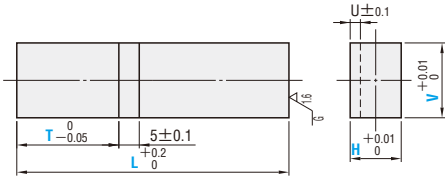


Tap pilot hole length=2×M+5±2.0

Double flanges
HWB
PHWB

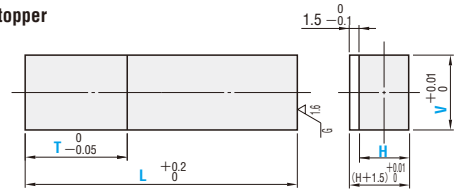


With key groove
HKB
PHKB



T≧2

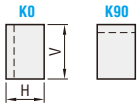
Flange stopper
HTB
PHTB



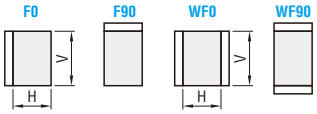
Details of key groove

Flange Head details

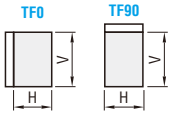
Key groove position specified



Flange position specified



Flange stopper position specified



Catalog No.		H \ V	3	4	5	6	8	10	13	16	20	22	25	28	30	(40)	(50)
Normal	HPB PHPB	(3)	○	○	○	○	○	○	○	○	○	○					
		(4)		○	○	○	○	○	○	○	○	○					
Tapped (H5～30)	HMB PHMB	5			○	○	○	○	○	○	○	○	○	○	○		
		6				○	○	○	○	○	○	○	○	○	○		
With key groove	HKB PHKB	8					○	○	○	○	○	○	○	○	○	○	
		10						○	○	○	○	○	○	○	○	○	○
Single flange	HFB PHFB	13							○	○	○	○	○	○	○	○	○
		16								○	○	○	○	○	○	○	○
Double flanges	HWB PHWB	20									○	○	○	○	○	○	○
		22										○	○	○	○	○	○
Flange stopper	HTB PHTB	25											○	○	○	○	○
		28												○	○	○	○
		30													○	○	○

L	T With key groove	T Flange stopper	M	U
13 16 20 25 P.363	T≧2.0 0.1mm increments	13 16 20 22 25	—	1.0
40 50 60 70 80 90 100			3 4	
			5 6 8	1.5

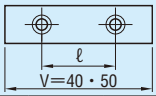
H(3)(4) ··· L40～70 If H dimension is (3) or (4), full length L is within a range of 40～70. (L80 is a specification available for HPB only.)

V(40)・(50) are specifications available for **HPB・HMB・HKB・HFB・HWB** only.

For L13 ～ 25, refer to short block punch blanks.
However, only tapped and flange types are available. P.363

HMB: V=40・50 ··· Tap holes at 2 locations

V	40	50
ℓ	20	24



Order

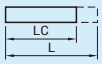
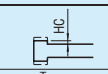
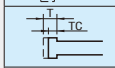
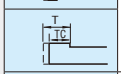
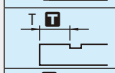
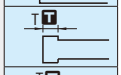
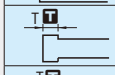
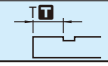
Catalog No.	V	H	—	L	—	T	—	K・F・WF・TF
PHKB	16	13	—	50	—	T20.5	—	K90

Days to Ship

Quotation

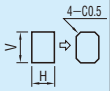
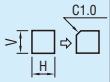
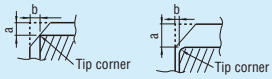
Alterations

Catalog No.	V	H	—	L(LC)	—	T	—	K·F·WF·TF	—	(HC·TC·TKC, etc.)
PHKB	08	04	—	LC58.5	—	T25.5	—	K0	—	TKC

	Alteration	Code	Spec.	1Code
Full length		LC	Full length change 13≦LC<L 0.1mm increments For HMB·PHMB : If H dimension is 8 or less···LC≧20 If H dimension is 10···LC≧24 If H dimension is 13 or more···LC≧28 For tapped types, HMBS and PHMBS (P.391) can be used to provide shorter sizes.	
Alterations to flange, head, and key groove		HC	Flange width or head width change 0≦HC<1.5 0.1mm increments	
		TC	Flange thickness change 2≦TC<5 0.1mm increments (If combined with TKC, 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
			Head thickness change 2≦TC<25 0.1mm increments (If combined with TKC, 0.01mm increments can be selected.) Can be used for flange stopper types.	
		TKC	Key groove position tolerance change T 0/−0.05 ⇨ 0/−0.02	
			Flange tolerance change T +0.2/0 ⇨ +0.02/0	
			Head thickness tolerance change T 0/−0.05 ⇨ 0/−0.02	
		TKM	Flange tolerance change T +0.2/0 ⇨ 0/−0.02	
		RTC	Key groove position tolerance change T 0/−0.05 ⇨ +0.05/0	

Price

Quotation

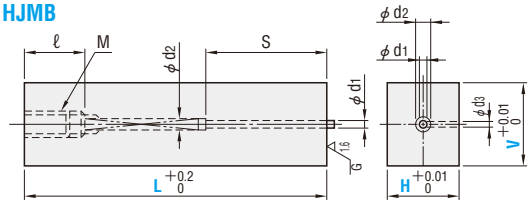
	Alteration	Code	Spec.	1Code
Alterations to tap		MC (MMC)	Tap hole diameter change Material equivalent to SKD11 H \ V: 6 / 8 / 10 / 13 / 16 / 20 / 22 / 25 / 28·30 6: M4 → M3 — — 8: — M5 → M4 — 10: — — M6→M4 / M6→M5 M6→M5 13: — — — M8→M5 / M8→M6 M8→M6 For change from M6 to M4 or change from M8 to M5, select MMC. Tap hole diameter change Powdered high-speed steel H \ V: 6 / 8 / 10 / 13 / 16 / 20 / 22 6: M4 → M3 — 8: — M5 → M4 10: — — M6 → M5 13: — — — M8 → M6	Quotation
Alterations to shape		CC	Chamfering to four corners of shank. The four corners of shank are chamfered to C0.5.	
		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≧1.3  ■Selection of chamfering position Can be used for normal and tapped types only.	

JECTOR BLOCK PUNCH BLANKS

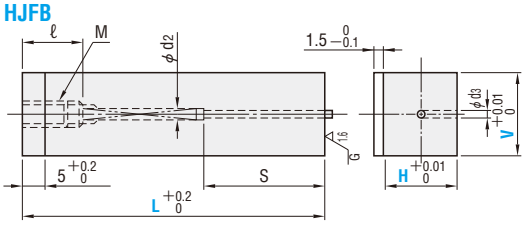
M H	Catalog No.			
	Tapped	With key groove	Single flange	Double flanges
Equivalent to SKD11 60 ~ 63HRC	HJMB	HJKB	HJFB	HJWB

RoHS

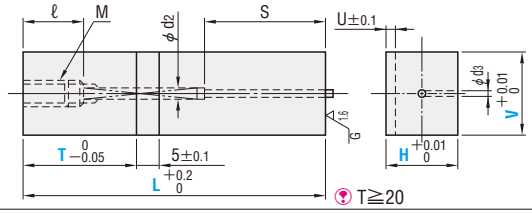
Tapped
HJMB



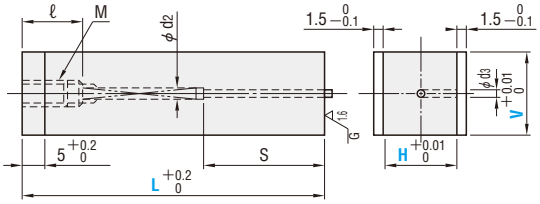
Single flange
HJFB



With key groove
HJKB



Double flanges
HJWB



The d_3 hole may be on the H side in some cases.

Details of key groove

Details of flange

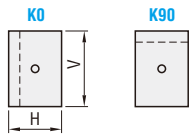
Catalog No. / Type	H \ V	6	8	10	13	16	20	22	25	28	30	L	0.1mm T	d1×S L=40	d1×S L=50	d1×S L=60～80	d2	d3	M	ℓ	U
Tapped HJMB / With key groove HJKB / Single flange HJFB / Double flanges HJWB	6	○	○	○	○	○	○	○	○	○	○	40 50 60 70 80	T≧20	0.7×15	0.7×20		2.6	1.0	4	12	1.0
	8		○	○	○	○	○	○	○	○	○			1.1×15	1.1×27		3.4	1.5	5		1.5
	10			○	○	○	○	○	○	○	○			1.5×15	1.5×28		4.4		6		
	13				○	○	○	○	○	○	○			1.8×15	1.8×28				8		
	16					○	○	○	○	○	○			2.8×17	2.8×24	2.8×36					
	20						○	○	○	○	○										
	22							○	○	○	○										
	25								○	○	○										

Order

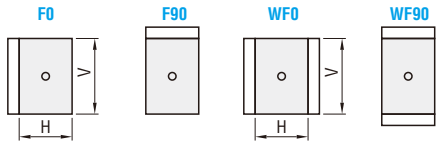
Catalog No.	V	H	—	L	—	0.1mm increments T≧20	—	K·F·WF
HJMB	08	06	—	70				
HJKB	25	20	—	80	—	T30.5	—	K0
HJFB	13	10	—	60			—	F90
HJWB	13	10	—	60			—	WF90

Days to Ship Quotation

■Key groove position specified

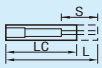


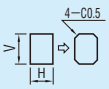
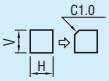
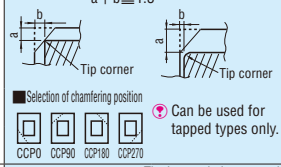
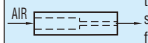
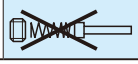
■Flange position specified



Alterations

Catalog No.	V	H	—	L(LC)	—	T	—	K·F·WF	— (HC·TC·TKC, etc.)
HJKB	28	20	—	LC65.5	—	T20.5	—	K0	

	Alteration	Code	Spec.	1Code
Alterations to full length		LC	Full length change 33≦LC<0.1 0.1mm increments S dimension is shortened by (L−LC).	Quotation
Alterations to key groove		TKC	Key groove position tolerance change $T^{0}_{-0.05}$ ⇨ $^{0}_{-0.02}$	
		RTC	Key groove position tolerance change $T^{0}_{-0.05}$ ⇨ $^{+0.05}_{0}$	
Alterations to flange		HC	Flange width change 0≦HC<1.5 0.1mm increments	
		TC	Flange thickness change 3.5≦TC<5 0.1mm increments (If combined with TKC, 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 tolerance change $T^{+0.2}_{0}$ ⇨ $^{+0.02}_{0}$	
		TKM	Flange tolerance change $T^{+0.2}_{0}$ ⇨ $^{0}_{-0.02}$	

	Alteration	Code	Spec.	1Code
Alterations to shape		CC	Chamfering to four corners of shank The four corners of shank are chamfered to C0.5.	
		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≧1.3  Can be used for tapped types only.	Quotation
		AC	 The jector pin is removed to create an air path and the side vent hole is plugged from the inside by inserting a resin (ABS) ring.	
		NC	 The jector pin is removed. Cannot be combined with AC.	

Price

Quotation

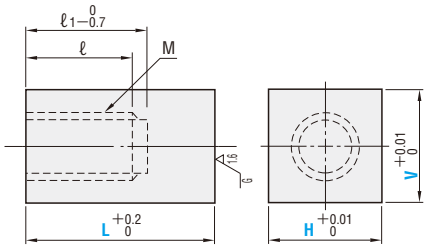
SHORT BLOCK PUNCH BLANKS

M / H	Catalog No.		
	Tapped	Single flange	Double flanges
Equivalent to SKD11 60～63HRC	HMBS	HFBS	HWBS
Powdered high-speed steel 64～67HRC	PHMBS	PHFBS	PHWBS

RoHS

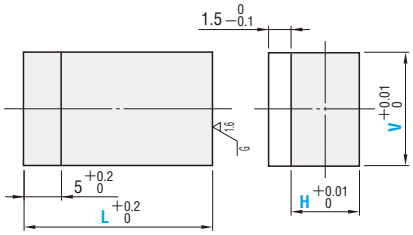
Tapped

HMBS
PHMBS



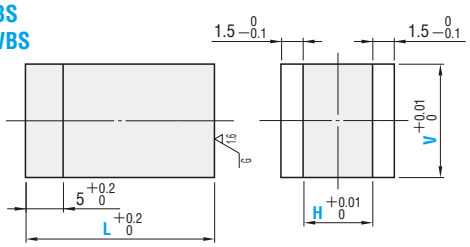
Single flange

HFBS
PHFBS



Double flanges

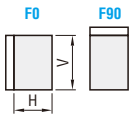
HWBS
PHWBS



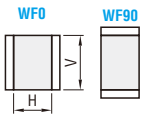
Details of flange

■Flange position specified

・Single flange



・Double flanges



Catalog No.		H \ V	6	8	10	13	16	20	L	M	ℓ	ℓ1
Tapped	HMBS PHMBS	6	○	○	○	○	○	○	(13) (16) 20 25	4	6	8.5
		8		○	○	○	○	○		5	7.5	10.0
Single flange	HFBS PHFBS	10			○	○	○	○		6	9	12.5
		13				○	○	○		8	12	15.5
Double flanges	HWBS PHWBS	16					○	○				
		20						○				

Tapped (HMBS・PHMBS)
●L (13)···L13 is a specification available for H6・H8 only.
●L (16)···L16 is a specification available for H6～H10 only.

Order

Catalog No.	V	H	—	L	—	F・WF
HFBS	08	06	—	20	—	F90

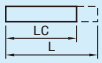
Days to Ship **Quotation**

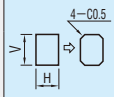
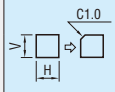
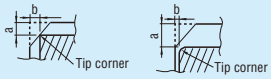
■Features

1. These are short type block punch blanks which can be installed onto the stripper plate.
2. The tapped types feature tap lengths and pilot hole lengths that are shorter than conventional types.

Alterations

Catalog No.	V	H	—	L(LC)	—	F·WF	—	(HC·TC·TKC, etc.)
PHFBS	20	10	—	LC15.5	—	F0	—	TC2.5

	Alteration	Code	Spec.	1Code
Alterations to full length		LC	Full length change 0.1mm increments 13<LC<25 For tapped types (HMBS·PHMBS), the LC ranges are shown below. H: 6·8 — LC range: 13<LC<25 H: 10 — LC range: 16<LC<25 H: 13 ~ 20 — LC range: 20<LC<25	Quotation
Alterations to tap		MC	Tap diameter change V: 6, 8, 10, 13, 16, 20 H=6: M4 → M3 H=8: — / M5 → M4 H=10: — / — / M6 → M5 H=13: — / — / — / M8 → M6 For M3, the ℓ_1 dimension is $7^{0}_{-0.7}$.	
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, 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 tolerance change T $^{+0.2}_{0}$ ⇨ $^{+0.02}_{0}$	
		TKM	Flange tolerance change T $^{+0.2}_{0}$ ⇨ $^{0}_{-0.02}$	

	Alteration	Code	Spec.	1Code
Alterations to shape		CC	Chamfering to four corners of shank The four corners of shank are chamfered to C0.5.	Quotation
		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≧1.3  ■Selection of chamfering position Can be used for tapped types only.	

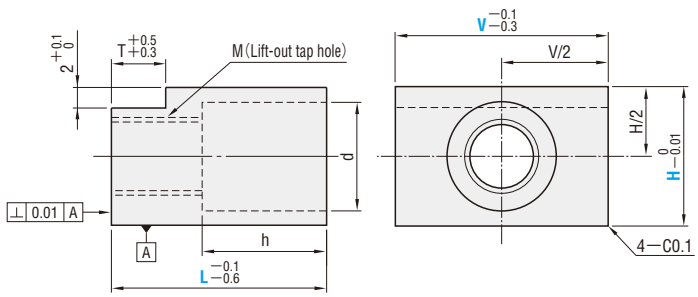
Price

Quotation

FLANGE HOLDERS

RoHS

HFW

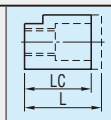
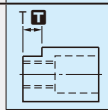
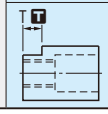


M SKS3
H 53 ~ 56 HRC

Mounting bolt d	Mounting bolt h	Mounting bolt Size	Lift-out tap hole M	T	Catalog No.	V	H	L	Base unit price 1~19 pieces
8	6	M4	M5	3	HFW	13	10	13	Quotation
				5				16	
	9.5							20	
								25	
9.5	7	M5	M6	3		16	13	13	
				5				16	
	10.5					20		20	
								25	

Alterations

Catalog No.	V	H	—	L (LC)	—	(TKC)
HFW	13	13	—	LC22	—	TKC2

Alteration		Code	Spec.	1Code
Alterations to full length		LC	Changes the full length. Can be used for L20•25. 20<LC<25 1mm increments h is shortened by (L−LC).	Quotation
Alterations to flange		TKC1	Changes the flange holder (T) to minus tolerance. $T^{+0.5}_{+0.3} \Rightarrow T^{-0.1}_{-0.3}$	
		TKC2	Changes the flange holder (T) tolerance. $T^{+0.5}_{+0.3} \Rightarrow T^{+0.05}_{+0.03}$	

Order

Catalog No.	V	H	—	L
HFW	13	13	—	20

Days to Ship: Quotation

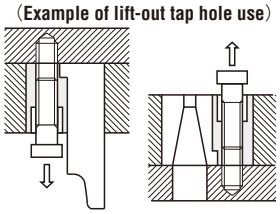
Price: Quotation

Example

■Features

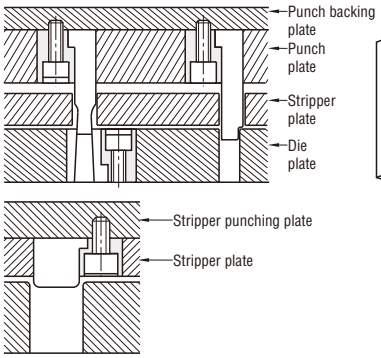
1. Allows easier punch & die maintenance. (Example of use 1, top diagram)
   Maintenance is possible without disassembling the die. (Example of use 1, bottom diagram)
2. Suitable for thin punches where keys cannot be used. (Example of use 2)
3. Counterbore machining on the stripper plate side is not necessary when a key is used.
4. By setting the amount of regrinding when the die is first assembled, and then assembling the die as shown in "Example of use 3", it is possible to visually judge the timing for punch replacement.

(Example of lift-out tap hole use)

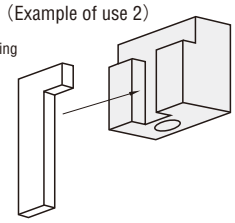


Screw a bolt into the lift-out tap hole and pull the die away from the plate.

(Example of use 1)

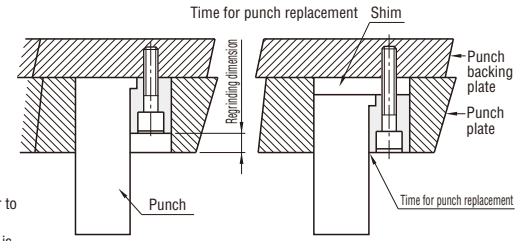


(Example of use 2)



※Machining is necessary in order to fit the punch into the holder.
※With H13, the above machining is possible.

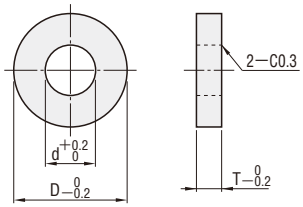
(Example of use 3)



FIXING KEYS FOR PUNCHES WITH KEY GROOVES

RoHS

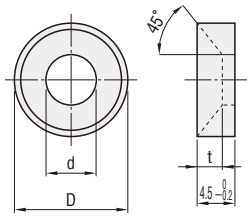
Catalog No.	M	H	S
PSKB	S45C	45 ~ 55HRC	—
PSKBH	SKS3	58 ~ 62HRC	Chromate treatment (silver)



Bolt	D	d	T	Catalog No. Type	Catalog No. No.	Base unit price 1 ~ 19 pieces	Volume discount unit price 20 ~ 49	50 ~ 99	100 ~ 200
M4	10	4.2	3	PSKB	4	Quotation			
			4.5		4—4.5				
M5	12	5.2	3		5				
			4.5		5—4.5				
M6	14	6.2	3		6				
			4.5		6—4.5				
M4	10	4.2	3	PSKBH	4				
			4.5		4—4.5				
M5	12	5.2	3		5				
			4.5		5—4.5				
M6	14	6.2	3		6				
			4.5		6—4.5				

RoHS

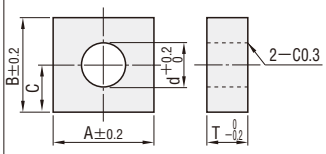
Catalog No.	M	H
PSKS	S45C	45 ~ 55HRC
PSKJ	SKS3	58 ~ 62HRC



Bolt	D	d	t	Catalog No. Type	Catalog No. No.	Base unit price 1 ~ 19 pieces	Volume discount unit price 20 ~ 49	50 ~ 99	100 ~ 200
M4	10	4.5	2.5	PSKS	4	Quotation			
M5	13	5.5	3		5				
M4	12	4.2	2.5	PSKJ	4				
M5	15	5.2	3		5				

RoHS

Catalog No.	M	H	S
PSK	S45C	45 ~ 55HRC	—
PSKP			
PSKH	SKS3	58 ~ 62HRC	Chromate treatment (silver)

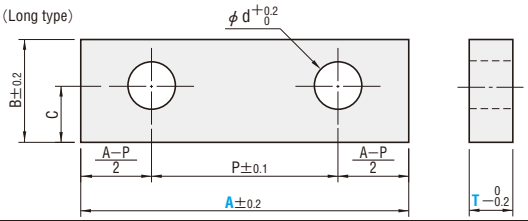


Bolt	A	B	C	d	T	Catalog No. Type	Catalog No. No.	Base unit price 1 ~ 19 pieces	Volume discount unit price 20 ~ 49	50 ~ 99	100 ~ 200
M4	10	11	6	4.2	3	PSK	4—3				
					4.5		4				
M5				5.2	3		5—3				
					4.5		5				
M6	12	14	7	6.2	3		6—3				
					4.5		6				
M4	11	11	5.5	4.2	3	PSKP	4—3	Quotation			
					4.5		4				
M5				5.2	3		5—3				
					4.5		5				
M6	14	14	7	6.2	3		6—3				
					4.5		6				
M4	10	11	6	4.2	3	PSKH	4—3				
					4.5		4				
M5				5.2	3		5—3				
					4.5		5				
M6	12	14	7	6.2	3		6—3				
					4.5		6				

Because PSKP has a hole at the center, it can be mounted in any direction.
For larger orders, ask about prices/delivery.

RoHS

PSKW (Long type)



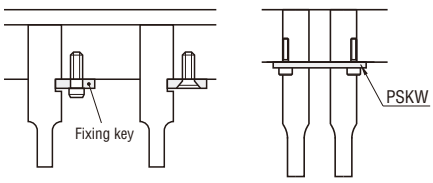
M S45C
H 45 ~ 55HRC

Bolt	B	C	d	P A=21 ~ 30	P A=31 ~ 40	P A=41 ~ 50	P A=51 ~ 60	Catalog No. Type	Catalog No. No.	T (Selection)	A 1mm increments	Base unit price 1 ~ 19 pieces A21 ~ 30	A31 ~ 40	A41 ~ 50	A51 ~ 60
M4	11	6	4.2	10	20	30	—	PSKW	4	3	21 ~ 50	Quotation			
M5			5.2	—	20	30	40		5	4.5	31 ~ 60				

Order

Catalog No.	—	T	—	A
PSKB4				
PSKS5				
PSKP5				
PSKW4	—	3	—	40

Days to Ship Quotation

Price Quotation

Example