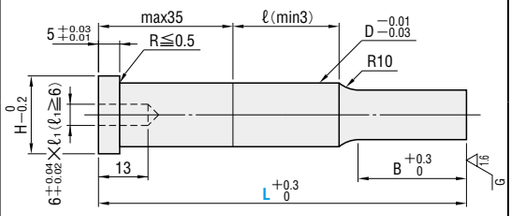
PUNCHES WITH LOCATING DOWEL HOLES
—FINISHED FOR RETAINERS・DICOAT® TREATMENT—

PRODUCTS DATA P.1599

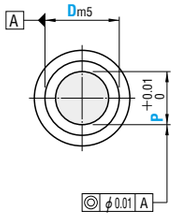
Type	A	Shank diameter D T tolerance	M H	Catalog No. Type	Tip shape	B Tip length	With dowel hole
Dicoat® treatment with locating dowel hole	Dowel pin MS6—25	D_{m5}	Equivalent to SKD11 60～63HRC Surface 3000HV	T—SP	Ⓐ Ⓓ Ⓡ Ⓔ Ⓖ	S L X	—C

RoHS

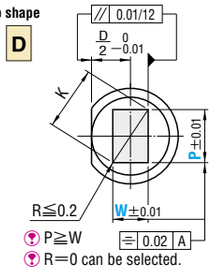
The tip shape can be selected from Tip shape A～G in the figure below.



Tip shape A

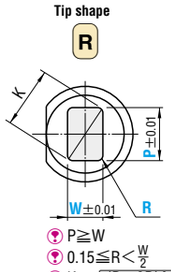


Tip shape D



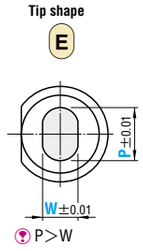
- P≧W
- R=0 can be selected.
- $K=\sqrt{P^2+W^2}$

Tip shape R



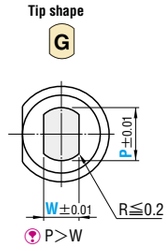
- P≧W
- $0.15 \leqq R < \frac{W}{2}$
- $K=\sqrt{(P-2R)^2+(W-2R)^2}+2R$

Tip shape E



- P>W

Tip shape G



- P>W

Catalog No. Type	D	L	0.01mm increments Ⓐ min. P max.	0.01mm increments Ⓐ P・Kmax.	0.01mm increments Ⓐ P・Wmin.	0.01mm increments DREG R	B	H
S T—SPAS—C T—SPDS—C T—SPRS—C T—SPES—C T—SPGS—C	10	(40) 50 60 70 80 90 100	3.00～ 9.99	9.97	2.50	$0.15 \leqq R < \frac{W}{2}$ (R only)	13	13
	13	(40) 50 60 70 80 90 100	6.00～ 12.99	12.97	3.00			16
	16	(40) 50 60 70 80 90 100	10.00～ 15.99	15.97	4.00		19	19
	20	(40) 50 60 70 80 90 100	13.00～ 19.99	19.97	5.00			23
	25	(40) 50 60 70 80 90 100	18.00～ 24.99	24.97	6.00			28
	32	(40) (50) 60 70 80 90 100 110 120	20.00～ 31.99	31.97	7.00			35
	38	(40) (50) 60 70 80 90 100 110 120	28.00～ 37.99	37.97	8.00			41
	45	(40) (50) 60 70 80 90 100 110 120	35.00～ 44.99	44.97	9.00			48
L T—SPAL—C T—SPDL—C T—SPRL—C T—SPEL—C T—SPGL—C	10	50 60 70 80 90 100	3.00～ 9.99	9.97	2.50		19	13
	13	50 60 70 80 90 100	6.00～ 12.99	12.97	3.00			16
	16	60 70 80 90 100	10.00～ 15.99	15.97	4.00		25	19
	20	60 70 80 90 100	13.00～ 19.99	19.97	5.00			23
	25	60 70 80 90 100	18.00～ 24.99	24.97	6.00			28
	32	60 70 80 90 100 110 120	20.00～ 31.99	31.97	7.00			35
	38	60 70 80 90 100 110 120	28.00～ 37.99	37.97	8.00			41
	45	60 70 80 90 100 110 120	35.00～ 44.99	44.97	9.00			48
X T—SPAX—C	10	70 80 90 100	6.00～ 9.99	——		–	30	13
	13	70 80 90 100	6.00～ 12.99					16
	16	80 90 100	10.00～ 15.99				40	19
	20	80 90 100	13.00～ 19.99					23
	25	80 90 100	18.00～ 24.99					28
	32	80 90 100 110 120	20.00～ 31.99					35
	38	80 90 100 110 120	28.00～ 37.99					41
	45	80 90 100 110 120	35.00～ 44.99					48

- L(40): D10～25⋯B=8 If full length is(40) and D dimension is 10～25, tip length is 8mm in all cases.
  D32～45⋯B=6 If full length is(40) and D dimension is 32～45, tip length is 6mm in all cases.
- L(50)⋯B=13 If full length is(50), tip length is 13mm in all cases.
- Ⓐ: P>D−0.03 ⋯ℓ=0 If P>D−0.03 for a round punch, $D_{-0.03}^{-0.01}$(press-in lead) is not included.
- DREG: P・K>D−0.05⋯ℓ=0 If P・K>D−0.05 for a shaped punch, $D_{-0.03}^{-0.01}$(press-in lead) is not included.

Order Catalog No. — L — P — W — R(Ⓡ only)
T—SPAS—C 25 — 100 — P18.05

Days to Ship Quotation

Alterations Catalog No. — L(LC) — P(PC) — W(WC) — R — (BC・HC・TC, etc.)
T—SPAS—C 25 — LC95 — P18.05 — BC30

Alteration	Code	Ⓐ	DREG	1Code
Alterations to tip	PC WC	Tip dimension change PC≧Pmin./2 WC≧P・Wmin./2 0.01mm increments		
	BC	Tip length change 2≦BC≦Bmax. 0.1 mm increments ? Full length L must be at least 25mm longer than tip length BC.	Tip length change 2≦BC≦Bmax. 0.1 mm increments ? Full length L must be at least 30mm longer than tip length BC.	
	PRC	Rounding of tip side edge 0.3≦PRC≦1 0.1 mm increments ? PRC≦(P−0.2)/2	——	Quotation
Alterations to full length	LC	Full length change 25+B(BC)≦LC<L 0.1 mm increments ? If difference between full length and tip length is 25mm or less, tip length is adjusted to (Full length−25mm). (If combined with LKC, 0.01 mm increments can be selected.)	Full length change 30+B(BC)≦LC<L 0.1 mm increments ? If difference between full length and tip length is 30mm or less, tip length is adjusted to (Full length−30mm).	
	LKC	Full length tolerance $L^{+0.3}_{0}$ ⇨ $^{+0.05}_{0}$ change		
Alterations to head	KC	Addition of single key flat to head	Key flat position change 1° increments	
	WKC	Addition of double key flats in parallel	Double key flats in parallel Can be combined with KC.	

Alteration	Code	Ⓐ	DREG	1Code
Alterations to head	KFC	Double key flats at 0° and a selected angle 1° increments ⊗ Cannot be combined with KC・WKC.	Double key flats at 0° and a selected angle 1° increments ⊗ Cannot be combined with KC・WKC.	Quotation
	NKC	——	No key flat	
	HC	Head diameter change D≦HC<H 0.1 mm increments		
	TC	Head thickness change 2≦TC<5 0.1mm increments ? Full length L is shortened by(5−TC). If combined with LC, full length is equal to LC.		
	TCC	Chamfering of head This improves the strength of the punch head. P.1611 0.1 mm increments 0.5≦TCC≦(H−D)/2		
Alterations to shank	UC	Modification for urethane stripper(USN) installation ? For details P.750 ? Can be used with D 10 ～ 32.		
	TPC	Dowel pin change MS6—25 that comes with the product is changed to MSTP6—25 (tapped type). ⊗ Cannot be used for D38・45.		
	NDC	No press-in lead ℓ≧3 ⇨ ℓ=0		

Example

■Uses of punches with locating dowel holes
This type of punch is mainly used with dies for parts such as automobile bodies, in combination with a retainer that holds the punch.
Rather than indirect positioning using the retainer dowel hole, these punches can be positioned directly using the dowel hole machined on the punch axis, improving die accuracy.
These punches are particularly effective when used for die machining with NC machines.
This type of punch can be also used with dies for the external panels of electrical appliances, either in combination with a retainer, or attached to the punch plate of an ordinary progressive die.

Price Quotation