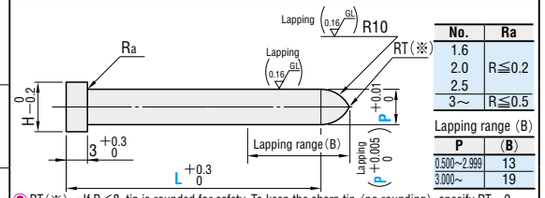
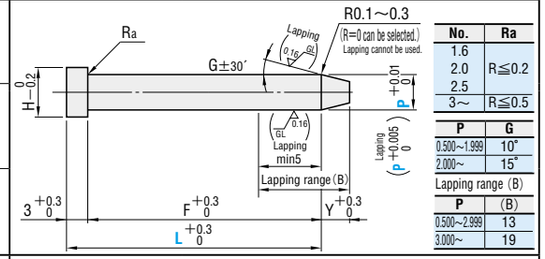
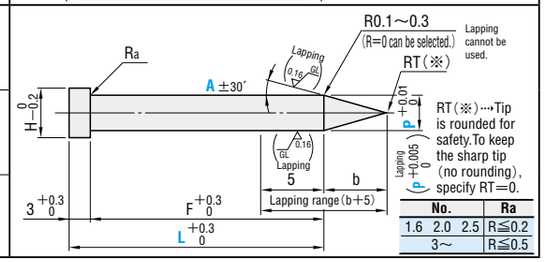
PILOT PUNCHES FOR FIXING TO STRIPPER PLATES

—STRAIGHT・NORMAL・LAPPING・TiCN COATING—

PRODUCTS DATA P.1604

Type	M H	Catalog No. Normal	Lapping	TiCN coating Surface hardness 3000HV	Shape
—Tip R type— RoHS  Shape of tip changes depending on P dimension. P.250	Equivalent to SKD11 60～63HRC	SPT	L—SPT	—	
	Equivalent to SKH51 61～64HRC	HTFR	L—HTFR	H—HTFR	
	Powdered high-speed steel 64～67HRC	PTFR	L—PTFR	H—PTFR	
—Tapered tip type— RoHS 	Equivalent to SKD11 60～63HRC	TPT	L—TPT	—	
	Equivalent to SKH51 61～64HRC	HTFT	L—HTFT	H—HTFT	
	Powdered high-speed steel 64～67HRC	PTFT	L—PTFT	H—PTFT	
—Sharp tip angle type— RoHS 	Equivalent to SKD11 60～63HRC	APT	L—APT	—	
	Equivalent to SKH51 61～64HRC	HTFA	L—HTFA	H—HTFA	
	Powdered high-speed steel 64～67HRC	PTFA	L—PTFA	H—PTFA	

RT(※)…If P<8, tip is rounded for safety. To keep the sharp tip (no rounding), specify RT=0. (If P≧8 for tip R type, the tip end is flat. P.1592)

For the length of tip R, refer to the products data "Punch R length". P.1592

No.	Ra
1.6 2.0 2.5	R≦0.2
3～	R≦0.5

Lapping range (B)

P	(B)
0.500～2.999	13
3.000～	19

R0.1～0.3 (R=0 can be selected.) Lapping cannot be used.

P	G
0.500～1.999	10°
2.000～	15°

Lapping range (B)

P	(B)
0.500～2.999	13
3.000～	19

R0.1～0.3 (R=0 can be selected.) Lapping cannot be used.

RT(※)…Tip is rounded for safety. To keep the sharp tip (no rounding), specify RT=0.

No.	Ra
1.6 2.0 2.5	R≦0.2
3～	R≦0.5

Catalog No. Type	No.	0.1mm increments L	0.01mm increments (0.001mm increments for lapping) min. P max.	A	Y	H
M Equivalent to SKD11 —Normal— —Lapping— SPT L—SPT; TPT L—TPT; APT L—APT	1.6	10.0～40.0	0.50(1.00) ～1.60	(10) 15 20 25 30	(2)	2.6
	2.0		1.00～ 2.00			3
	2.5		1.50～ 2.50			3.5
	3		2.00～ 3.00			5
	4		3.00～ 4.00			7
M Equivalent to SKH51 —Normal— —Lapping— —TiCN coating— HTFR L—HTFR H—HTFR; HTFT L—HTFT H—HTFT; HTFA L—HTFA H—HTFA	5		4.00～ 5.00		3	8
	6		5.00～ 6.00			9
	8		6.00～ 8.00		5	11
	10		8.00～ 10.00			13
M Powdered high-speed steel —Normal— —Lapping— —TiCN coating— PTFR L—PTFR H—PTFR; PTFT L—PTFT H—PTFT; PTFA L—PTFA H—PTFA	13		10.00～ 13.00		8	16
	16		13.00～ 16.00			19

P(1.00)…For TiCN coating, Pmin. is 1.00. Y(2)…If P≦0.8, Y dimension is 0.8mm. ⊗A(10)…If P≧2.00, A10 cannot be selected.

Order

Catalog No.	L	P	A	RT=0 R=0
PTFR 6	18.2	P5.80		RT0
APT 3	32.0	P3.00	A15	
TPT 6	18.3	P5.73		

A Can be used for sharp tip angle types only.

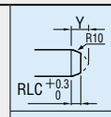
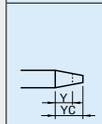
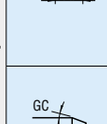
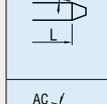
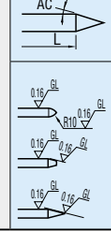
RT=0 only can be selected. (Can be used for tip R types with P<8 and sharp tip angle types. However lapping cannot be used.)

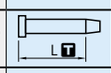
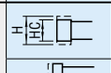
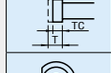
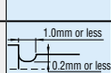
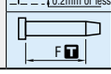
R=0 only can be selected. (Can be used for tapered tip types and sharp tip angle types. However lapping cannot be used.)

Days to Ship Quotation

Alterations

Catalog No.	L	P	A(AC)	(RT=0 R=0)	(YC・GC・HC, etc.)
APT 6	20.0	P5.02	AC18		

Alteration		Code	Tip R type	Tapered tip and sharp tip angle types	1Code
Alterations to tip		RLC	Tip R is cut flat. 2≦RLC<Y<8 Y=√P(10−P/4) 0.1mm increments	——	Quotation
		YC	——	Tip taper length change ・P<2.0 1≦YC≦P×2.83−0.3 ・P≧2.0 1≦YC≦P×1.86−0.3≦18 0.1mm increments ⊗Cannot be used for sharp tip angle types.	
		GC	——	Tip angle change 1.000≦P≦1.999 …5°≦GC<10° 2.000≦P≦5.999 …5°≦GC<15° Can be used with P1.000～5.999. Can be used for No.2.5～No.6. YC≦P/TanGC−0.3≦1 ⊗Cannot be used for sharp tip angle types.	
		AC	——	Tip angle change 15°<AC≦45° 1° increments ⊗Cannot be used for tapered tip types.	
		SC	Lapping of tip Can be used with TiCN coating only. P dimension tolerance remains the same. The base material is finished before the coating is applied. ⊗R=0 and RT=0 cannot be selected. Please refer to P.277 for Lapping range.		

Alteration		Code	Tip R type	Tapered tip and sharp tip angle types	1Code
Tip		PKC	Tip diameter tolerance change P +0.01 0 ⇨ +0.005 0 P dimension can be selected in 0.001mm increments. ⊗Lapping cannot be used. ⊗TiCN coating cannot be used for P>13.		
Length		LKC	——	Full length tolerance change L +0.3 0 ⇨ +0.05 0	
Alterations to head		HC	Head diameter change P≦HC<H 0.1mm increments With TiCN coating, 2.6≦P≦HC<H		
		TC	Head thickness change 2≦TC<3 0.1mm increments (If combined with TKC/TKM, 0.01mm increments can be selected.) The full length remains as specified. ⊗Cannot be used with TiCN coating.		
		KC	Addition of single key flat to head		Quotation
		WKC	Addition of double key flats in parallel		
		TKC	Head thickness tolerance change T +0.3 0 ⇨ +0.02 0	Head thickness tolerance change T +0.3 0 ⇨ +0.02 0 (F +0.3 0 ⇨ +0.1 0)	
		TKM	Head thickness tolerance change T +0.3 0 ⇨ 0 −0.02	Head thickness tolerance change T +0.3 0 ⇨ 0 −0.02 (F +0.3 0 ⇨ +0.1 0)	
Shank		TNK	Addition of undercut (Cut of 0.2 or less) Can be used for P≧1.00.		
		FKC	——	F dimension tolerance change F +0.3 0 ⇨ +0.05 0 ⊗Cannot be combined with LKC.	

Price Quotation

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