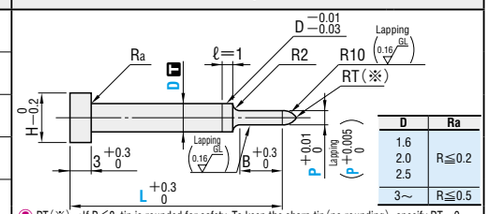
PILOT PUNCHES FOR FIXING TO STRIPPER PLATES

—NORMAL・LAPPING—

Type	Shank diameter D T tolerance	M H	Catalog No. Normal	Catalog No. Lapping
—Tip R・Normal— RoHS	D_{m5}	Equivalent to SKD11 60～63HRC	SPTP	L—SPTP
		Equivalent to SKH51 61～64HRC	HTFPR	L—HTFPR
		Powdered high-speed steel 64～67HRC	PTFPR	L—PTFPR
—Tip R・Lapping—	$D^{+0.005}_{0}$	Equivalent to SKD11 60～63HRC	A—SPTP	AL—SPTP
		Equivalent to SKH51 61～64HRC	A—HTFPR	AL—HTFPR
Shape of tip changes depending on P dimension. P.250 For shank diameter tolerance D T, select either m5 or $^{+0.005}_{0}$.		Powdered high-speed steel 64～67HRC	A—PTFPR	AL—PTFPR
—Tapered tip・Normal— RoHS	D_{m5}	Equivalent to SKD11 60～63HRC	TPTP	L—TPTP
		Equivalent to SKH51 61～64HRC	HTFPT	L—HTFPT
		Powdered high-speed steel 64～67HRC	PTFPT	L—PTFPT
—Tapered tip・Lapping—	$D^{+0.005}_{0}$	Equivalent to SKD11 60～63HRC	A—TPTP	AL—TPTP
		Equivalent to SKH51 61～64HRC	A—HTFPT	AL—HTFPT
For shank diameter tolerance D T, select either m5 or $^{+0.005}_{0}$.		Powdered high-speed steel 64～67HRC	A—PTFPT	AL—PTFPT
—Sharp tip angle・Normal— RoHS	D_{m5}	Equivalent to SKD11 60～63HRC	APTP	L—APTP
		Equivalent to SKH51 61～64HRC	HTFPA	L—HTFPA
		Powdered high-speed steel 64～67HRC	PTFPA	L—PTFPA
—Sharp tip angle・Lapping—	$D^{+0.005}_{0}$	Equivalent to SKD11 60～63HRC	A—APTP	AL—APTP
		Equivalent to SKH51 61～64HRC	A—HTFPA	AL—HTFPA
For shank diameter tolerance D T, select either m5 or $^{+0.005}_{0}$.		Powdered high-speed steel 64～67HRC	A—PTFPA	AL—PTFPA

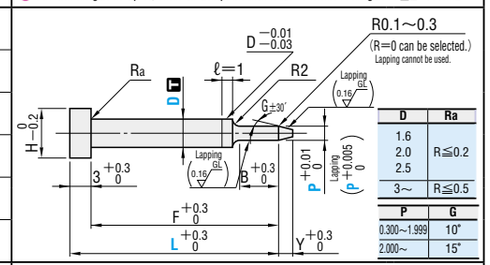
Shape



D	Ra
1.6	R≦0.2
2.0	
2.5	
3～	R≦0.5

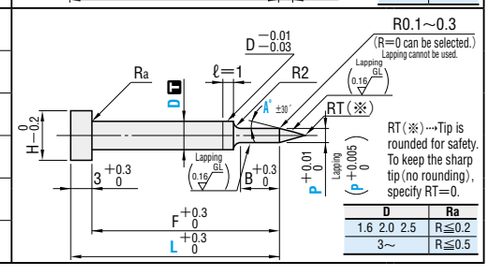
RT(※)…If P<8, tip is rounded for safety. To keep the sharp tip (no rounding), specify RT=0. (If P≧8 for tip R type, the tip end is flat. P.1592)

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



D	Ra
1.6	R≦0.2
2.0	
2.5	
3～	R≦0.5

P	G
0.300～1.999	10°
2.000～	15°



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

D	Ra
1.6 2.0 2.5	R≦0.2
3～	R≦0.5

Catalog No. Type	D	0.1mm increments L	0.01mm increments (0.001mm increments for lapping) min. P max.	A	B	Y	H
—Normal— (D_{m5}) ($D^{+0.005}_{0}$) —Lapping— (D_{m5}) ($D^{+0.005}_{0}$)	1.6	10.0 ～ 40.0	0.30～ 1.59	(10) 15 20 25 30	(4)	(1)	2.6
	2.0		0.50～ 1.99				3
M Equivalent to SKD11 SPTP A—SPTP L—SPTP AL—SPTP	2.5		1.00～ 2.49			2	3.5
TPTP A—TPTP L—TPTP AL—TPTP	3		1.00～ 2.99				5
APTP A—APTP L—APTP AL—APTP	4		2.00～ 3.99				7
M Equivalent to SKH51 HTFPR A—HTFPR L—HTFPR AL—HTFPR	5		2.00～ 4.99			3	8
HTFPT A—HTFPT L—HTFPT AL—HTFPT	6		2.50～ 5.99				9
HTFPA A—HTFPA L—HTFPA AL—HTFPA	8		5.00～ 7.99			5	11
M Powdered high-speed steel PTFPR A—PTFPR L—PTFPR AL—PTFPR	10		7.00～ 9.99				13
PTFPT A—PTFPT L—PTFPT AL—PTFPT	13		10.00～ 12.99			8	16
PTFPA A—PTFPA L—PTFPA AL—PTFPA	16		13.00～ 15.99				19

P>D−0.03…ℓ=0 If P>D−0.03, $D^{-0.01}_{-0.03}$ (press-in lead) is not included.

If L<12, tip length B is 2mm.

B(4)…If P<0.5, tip length B is at 2mm.

A(10)…If P≧2.00, A10 cannot be selected.

Y(1)…If P<0.5, Y dimension is 0.5mm.

Order

Catalog No. — L — P — A — (RT=0 / R=0)

SPTP 3 — 28.0 — P2.48

APTP 4 — 32.0 — P3.50 — A15 — RT0

TPTP 5 — 25.0 — P2.06 — R0

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) — (BC・YC・GC, etc.)

PTFPA 3 — 28.0 — P2.48 — AC18 — BC3.0

Alteration	Code	Tip R type	Tapered tip and sharp tip angle types	1Code
Alterations to tip: BC	BC	Tip length change 2≦BC≦Bmax. 0.1mm increments. Cannot be used with P0.300～0.499. Full length L must be at least 8mm longer than tip length BC.	P / Bmax.: 0.500～0.999 / 8; 1.000～1.199 / 15; 1.200～1.999 / 20; 2.000～ / 24	
RLC	RLC	Tip R is cut flat. 2≦RLC<Y<8 $Y=\sqrt{P(10-P/4)}$ 0.1mm increments	—	
YC	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. Cannot be used with P0.300～0.499.	Quotation
GC	GC	—	Tip angle change 1.000≦P≦1.999 …5°≦GC<10° 2.000≦P≦5.999 …5°≦GC<15° Can be used with D2.5～D6. YC≦P/2tan GC−0.3≦18 Cannot be used for sharp tip angle types.	
AC	AC	—	Tip angle change 15°<AC≦45° 1° increments. Cannot be used for tapered tip types.	
PKC	PKC	Tip diameter tolerance change $P^{+0.01}_{0}$ ⇨ $^{+0.005}_{0}$ Cannot be used with lapping. P dimension can be selected in 0.001mm increments.		

Alteration	Code	Tip R type	Tapered tip and sharp tip angle types	1Code
Length: L T	LKC	—	Full length tolerance change $L^{+0.3}_{0}$ ⇨ $^{+0.05}_{0}$	
Alterations to head: H HC	HC	Head diameter change D≦HC<H 0.1mm increments		
TC	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.		
	KC	Addition of single key flat to head		
	WKC	Addition of double key flats in parallel		Quotation
T T	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 $T^{+0.3}_{0}$ ⇨ $^{0}_{-0.02}$ ($F^{+0.3}_{0}$ ⇨ $^{+0.1}_{0}$)	
1.0mm or less 0.2mm or less	TNK	Addition of undercut (Cut of 0.2 or less)		
Shank: F T	FKC	—	F dimension tolerance change $F^{+0.3}_{0}$ ⇨ $^{+0.05}_{0}$ Cannot be combined with LKC.	
ℓ D −0.01 −0.03	NDC	No press-in lead ℓ=1 ⇨ ℓ=0		

Price Quotation

PILOT PUNCHES