
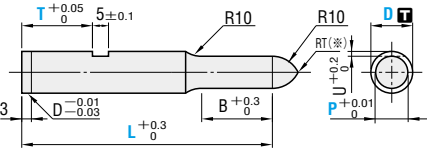

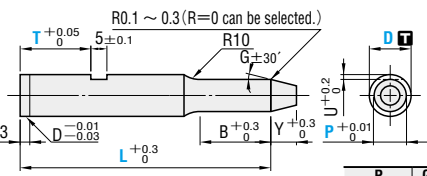

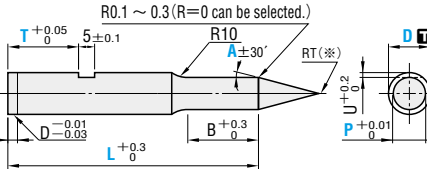


PILOT PUNCHES WITH KEY GROOVES

—NORMAL—

Type	Shank diameter D tolerance	Material	Catalog No.		Shape
			Type	B tip length	
— Tip R type — RoHS  Shape of tip changes depending on P dimension. P.250 For shank diameter tolerance D, select either m5 or +0.005.	Dm5	Equivalent to SKD11 60~63HRC	STKA	 RT(*) (**) If P<8, tip is rounded for safety. To keep the sharp tip (no rounding), specify RT=0. (If P≥8, tip end is flat. P.1592) For the length of tip R, refer to the products data "Punch R length". P.1592	
		Equivalent to SKH51 61~64 HRC	HSTKA		
		Powdered high-speed steel 64~67HRC	PSTKA		
	D+0.005/0	Equivalent to SKD11 60~63HRC	A-STKA		
		Equivalent to SKH51 61~64 HRC	A-HSTKA		
		Powdered high-speed steel 64~67HRC	A-PSTKA		
— Tapered tip type — RoHS  For shank diameter tolerance D, select either m5 or +0.005.	Dm5	Equivalent to SKD11 60~63HRC	TPKA	 R0.1 ~ 0.3 (R=0 can be selected.) Tip length (B) X>L>S	
		Equivalent to SKH51 61~64 HRC	HTPKA		
		Powdered high-speed steel 64~67HRC	PTPKA		
	D+0.005/0	Equivalent to SKD11 60~63HRC	A-TPKA		
		Equivalent to SKH51 61~64 HRC	A-HTPKA		
		Powdered high-speed steel 64~67HRC	A-PTPKA		
— Sharp tip angle type — RoHS  For shank diameter tolerance D, select either m5 or +0.005.	Dm5	Equivalent to SKD11 60~63HRC	ATKA	 R0.1 ~ 0.3 (R=0 can be selected.) Tip length (B) X>L>S	
		Equivalent to SKH51 61~64 HRC	HATKA		
		Powdered high-speed steel 64~67HRC	PATKA		
	D+0.005/0	Equivalent to SKD11 60~63HRC	A-ATKA		
		Equivalent to SKH51 61~64 HRC	A-HATKA		
		Powdered high-speed steel 64~67HRC	A-PATKA		

Type	B tip length	D	L				A	0.1mm increments		B	Y	U
			0.01mm increments min.	0.01mm increments max.	T	T						
(Dm5) (D+0.005/0) Equivalent to SKD11 STKA A-STKA TPKA A-TPKA ATKA A-ATKA Equivalent to SKH51 HSTKA A-HSTKA HTPKA A-HTPKA HATKA A-HATKA Powdered high-speed steel PSTKA A-PSTKA PTPKA A-PTPKA PATKA A-PATKA	S	3	42	52	62 (72)	1.00 ~ 2.99	(10)	T>5.0	10	2	0.5	
		4	42	52	62 (72)	1.00 ~ 3.99						
		5	42	52	62 (72)	2.00 ~ 4.99						
		6	42	52	62 (72)	2.50 ~ 5.99						
		8	(42)	52	62 72 82 (92)	3.00 ~ 7.99						
		10	(42)	52	62 72 82 (92) (102)	3.00 ~ 9.99						
	L	3	52	62 (72)	1.00 ~ 2.99	(10)	T>5.0	15	2	0.5		
		4	52	62 (72)	1.00 ~ 3.99							
		5	52	62 (72)	2.00 ~ 4.99							
		6	52	62 (72)	2.50 ~ 5.99							
		8	52	62 72 82 (92)	3.00 ~ 7.99							
		10	52	62 72 82 (92) (102)	3.00 ~ 9.99							
	X	3	52	62 (72)	1.20 ~ 2.99	(10)	T>5.0	21	2	0.5		
		4	52	62 (72)	1.20 ~ 3.99							
		5	62 (72)	2.00 ~ 4.99								
		6	62 (72)	2.50 ~ 5.99								
8		62 72 82 (92)	3.00 ~ 7.99									
10		62 72 82 (92) (102)	3.00 ~ 9.99									
	3	52	62 (72)	1.20 ~ 2.99	(15)	T>5.0	27	3	1.0			
	4	52	62 (72)	1.20 ~ 3.99								
	5	62 (72)	2.00 ~ 4.99									
	6	62 (72)	2.50 ~ 5.99									
	8	62 72 82 (92)	3.00 ~ 7.99									
	10	62 72 82 (92) (102)	3.00 ~ 9.99									
	3	52	62 (72)	1.20 ~ 2.99	(15)	T>5.0	21	2	0.5			
	4	52	62 (72)	1.20 ~ 3.99								
	5	62 (72)	2.00 ~ 4.99									
	6	62 (72)	2.50 ~ 5.99									
	8	62 72 82 (92)	3.00 ~ 7.99									
	10	62 72 82 (92) (102)	3.00 ~ 9.99									
	3	52	62 (72)	1.20 ~ 2.99	(15)	T>5.0	27	3	1.0			
	4	52	62 (72)	1.20 ~ 3.99								
	5	62 (72)	2.00 ~ 4.99									
	6	62 (72)	2.50 ~ 5.99									
	8	62 72 82 (92)	3.00 ~ 7.99									
	10	62 72 82 (92) (102)	3.00 ~ 9.99									
	3	52	62 (72)	1.20 ~ 2.99	(30)	T>5.0	21	2	0.5			
	4	52	62 (72)	1.20 ~ 3.99								
	5	62 (72)	2.00 ~ 4.99									
	6	62 (72)	2.50 ~ 5.99									
	8	62 72 82 (92)	3.00 ~ 7.99									
	10	62 72 82 (92) (102)	3.00 ~ 9.99									
	3	52	62 (72)	1.20 ~ 2.99	(30)	T>5.0	27	3	1.0			
	4	52	62 (72)	1.20 ~ 3.99								
	5	62 (72)	2.00 ~ 4.99									
	6	62 (72)	2.50 ~ 5.99									
	8	62 72 82 (92)	3.00 ~ 7.99									
	10	62 72 82 (92) (102)	3.00 ~ 9.99									
	3	52	62 (72)	1.20 ~ 2.99	(30)	T>5.0	21	2	0.5			
	4	52	62 (72)	1.20 ~ 3.99								
	5	62 (72)	2.00 ~ 4.99									
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	10	62 72 82 (92) (102)	3.00 ~ 9.99									
	3	52	62 (72)	1.20 ~ 2.99	(30)	T>5.0	27	3	1.0			
	4	52	62 (72)	1.20 ~ 3.99								
	5	62 (72)	2.00 ~ 4.99									
	6	62 (72)	2.50 ~ 5.99									
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	10	62 72 82 (92) (102)	3.00 ~ 9.99									
	3	52	62 (72)	1.20 ~ 2.99	(30)	T>5.0	27	3	1.0			
	4	52	62 (72)	1.20 ~ 3.99								
	5	62 (72)	2.00 ~ 4.99									
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	10	62 72 82 (92) (102)	3.00 ~ 9.99									
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	4	52	62 (72)	1.20 ~ 3.99								
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	4	52	62 (72)	1.20 ~ 3.99								
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	10	62 72 82 (92) (102)	3.00 ~ 9.99									
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	4	52	62 (72)	1.20 ~ 3.99								
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	3	52	62 (72)	1.20 ~ 2.99	(30)	T>5.0	27	3	1.0			
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