



Catalog No.			L	0.01mm increments		0.1mm increments		0.01mm increments		0.1mm increments		0.01mm increments		0.1mm increments		M
Type	Tip shape	D		A		Diagonal Kmax.	D REG		R	D REG		V	F			
				P	B		P-W	R		B	Fmax					
—Standard type— (Dms) —Normal— MPTW MPHTW —TiCN coating— H—MPHTW —HW coating— HW—MPHTW (D+0.005) —Normal— A—MPT A—MPHTW —TiCN coating— AH—MPHTW —HW coating— AHW—MPHTW	A D R E G	5	40・50・60・70・80	1.00~ 1.99 2.00~ 3.99 4.00~ 4.98 4.00~ 4.98	2.0~ 20.0 2.0~ 35.0 2.0~ 45.0 2.0~ 45.0	4.96	0.80 (1.00)~ 1.49 1.50~ 1.99 2.00~ 3.49 3.50~ 4.96	R	2.0~ 8.0 2.0~ 13.0 2.0~ 19.0 2.0~ 25.0	B+f+2<F≤Fmax & F≤L—30	3					
		6	40・50・60・70・80	1.00~ 1.99 2.00~ 3.99 4.00~ 5.98 4.00~ 5.98	2.0~ 20.0 2.0~ 35.0 2.0~ 45.0 2.0~ 45.0	5.96	0.80 (1.00)~ 1.49 1.50~ 1.99 2.00~ 3.49 3.50~ 4.99 5.00~ 5.96	R	2.0~ 8.0 2.0~ 13.0 2.0~ 19.0 2.0~ 25.0 2.0~ 30.0		4					
		8	40・50・60・70・80・90・100	1.00~ 1.99 2.00~ 3.99 4.00~ 5.99 6.00~ 7.98 6.00~ 7.98	2.0~ 20.0 2.0~ 35.0 2.0~ 45.0 2.0~ 60.0 2.0~ 60.0	7.96	1.00~ 1.49 1.50~ 1.99 2.00~ 3.49 3.50~ 4.99 5.00~ 7.96	R	2.0~ 8.0 2.0~ 13.0 2.0~ 19.0 2.0~ 25.0 2.0~ 30.0		5					
		10	40・50・60・70・80・90・100	1.50~ 1.99 2.00~ 3.99 4.00~ 5.99 6.00~ 9.98 6.00~ 9.98	2.0~ 20.0 2.0~ 35.0 2.0~ 45.0 2.0~ 60.0 2.0~ 60.0	9.96	1.25~ 1.49 1.50~ 1.99 2.00~ 3.49 3.50~ 4.99 5.00~ 9.96	R	2.0~ 8.0 2.0~ 13.0 2.0~ 19.0 2.0~ 25.0 2.0~ 30.0		6					
		13	40・50・60・70・80・90・100	3.00~ 3.99 4.00~ 5.99 6.00~ 12.98 6.00~ 12.98	2.0~ 35.0 2.0~ 45.0 2.0~ 60.0 2.0~ 60.0	12.96	1.50~ 1.99 2.00~ 3.49 3.50~ 4.99 5.00~ 12.96	R	2.0~ 13.0 2.0~ 19.0 2.0~ 25.0 2.0~ 30.0		7					
		16	40・50・60・70・80・90・100	5.00~ 5.99 6.00~ 15.98 6.00~ 15.98	2.0~ 45.0 2.0~ 60.0 2.0~ 60.0	15.96	2.00~ 3.49 3.50~ 4.99 5.00~ 15.96	R	2.0~ 19.0 2.0~ 25.0 2.0~ 30.0		8					
		20	40・50・60・70・80・90・100	6.50~ 19.98 6.50~ 19.98 6.50~ 19.98	2.0~ 60.0 2.0~ 60.0 2.0~ 60.0	19.96	2.50~ 3.49 3.50~ 4.99 5.00~ 19.96	R	2.0~ 19.0 2.0~ 25.0 2.0~ 30.0		9					
		25	40・50・60・70・80・90・100	9.00~ 24.98 9.00~ 24.98 9.00~ 24.98	2.0~ 60.0 2.0~ 60.0 2.0~ 60.0	24.96	3.00~ 3.49 3.50~ 4.99 5.00~ 24.96	R	2.0~ 19.0 2.0~ 25.0 2.0~ 30.0		10					
		16	40・50・60・70・80・90・100	5.00~ 5.98 6.00~ 15.98 6.00~ 15.98	2.0~ 45.0 2.0~ 60.0 2.0~ 60.0	15.96	2.00~ 3.49 3.50~ 4.99 5.00~ 15.96	R	2.0~ 19.0 2.0~ 25.0 2.0~ 30.0		11					
		20	40・50・60・70・80・90・100	6.50~ 19.98 6.50~ 19.98 6.50~ 19.98	2.0~ 60.0 2.0~ 60.0 2.0~ 60.0	19.96	2.50~ 3.49 3.50~ 4.99 5.00~ 19.96	R	2.0~ 19.0 2.0~ 25.0 2.0~ 30.0		12					
		25	40・50・60・70・80・90・100	9.00~ 24.98 9.00~ 24.98 9.00~ 24.98	2.0~ 60.0 2.0~ 60.0 2.0~ 60.0	24.96	3.00~ 3.49 3.50~ 4.99 5.00~ 24.96	R	2.0~ 19.0 2.0~ 25.0 2.0~ 30.0		13					
		Tapped large-diameter type MPLTW														

Alteration		Code	(A)	D R E G	1Code
Alterations to full length		LC	Full length change $30 + F \leq LC < L$ 0.1 mm increments (If combined with LKC·LKZ, 0.01 mm increments can be selected.)		
		LKC	Full length tolerance change $L + \begin{smallmatrix} +0.3 \\ 0 \end{smallmatrix} \Rightarrow +0.05$		
		LKZ	Full length tolerance change $L + \begin{smallmatrix} +0.3 \\ 0 \end{smallmatrix} \Rightarrow +0.01$ ☒ Cannot be used with TiCN·HW coating		
		KC	Addition of single key slot ☒ Cannot be used for D5.		Key slot position change 1° increments
Others		WKC	Addition of double key slots in parallel ☒ Cannot be used for D5.		Double key slots in parallel. Can be combined with KC.
		NKC	—	No key slot	
		SKK		Single key flat on shank • D5·6 V ≤ D - 1.2 (Machining width 0.5) D8 ~ V ≤ D - 2.2 (Machining width 1)	
				☒ Cannot be combined with KC·WKC.	

PUNCHES