TBN1000

Diameter ø10 ~ 30 mm | R ~ 15 mm

K Cast Iron | P Steel

Pocketing | Ramping | Profiling

For medium to finish engraving of steel and cast iron dies

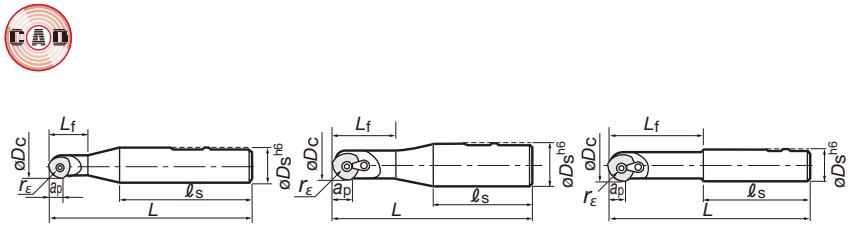


Fig. A | Fig. B | Fig. C

Cat. No.	Stock	Applicable insert	Dimensions (mm)							Fig.	Clamping screw	Clamp	Clamp screw	Wrench
			øDc	rε	L	ap	Lf	ℓs	øDs					
TBN1100SE	●	ZNCA1002FN2	10	5	90	5	15	60	16	A	CSTB-2.5B	–	–	T-8D
TBN1120SE	●	ZNCA1203FN	12	6	110	6	20	70			CSTB-3S			T-9D
TBN1160SE	●	ZNCA1603FN	16	8	130	8	25	85	20		CSTB-4S			T-15D
TBN1200SE	●	ZNCA2004FN ZNMM2004EN	20	10	160	10	35	100	25		CSTA-5S			T-15D
TBN1250SE	●	ZNCA2505FN ZNMM2505EN	25	12.5	175	12.5	45	100	32	B	CSTA-5S	CP536	DS-6T	T-15D
TBN1300SE	●	ZNCA3005FN ZNMM3005EN	30	15	190	15	90	100	32	C				

Inserts

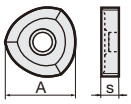


Fig. 1

Fig. 2

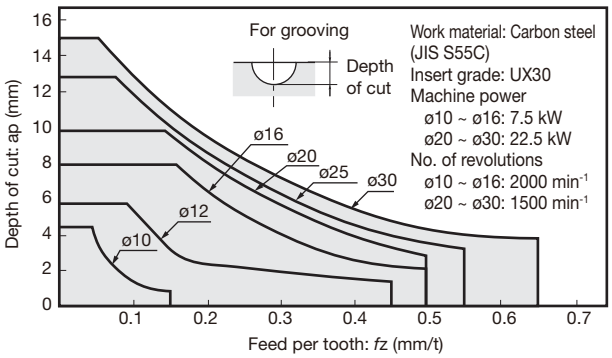
Fig. 3

Note : Type B inserts, used for cutter smaller than ø16 mm, are single-sided type.

Cat. No.	Accuracy	Grades		Dimensions (mm)		No. of cutting edges per insert	Type	Application
		Uncoated						
		TH10	UX30	A	s			
ZNCA1002FN2	C	●	●	7.958	2.5	2	Fig. 3	UX30 grade for steels TX10 grade for cast irons and light alloys
ZNCA1203FN		●	●	9.735	3	3	Fig. 2	
ZNCA1603FN		●	●	12.772	3.5			
ZNCA2004FN		●	●	15.862	4	6		
ZNCA2505FN		●	●	19.826	5			
ZNCA3005FN		●	●	23.618	5.5			
ZNMM2004EN	M		●	15.862	4	3	Fig. 1	
ZNMM2505EN			●	19.826	5			
ZNMM3005EN			●	23.618	5.5			

Note : M-class inserts are mainly used for medium finishing and C-class inserts are most suitable for finishing.

Guidelines for selecting depth of cut and feed



Standard cutting conditions for finishing

Work materials: Cast iron, carbon steels and alloy steels

Cat. No.	Grades	No. of rev. n (min-1)	Pick feed pf (mm)	Table feed Vf (mm/min)
TBN1100SE	UX30 TH10	3200	0.3	480
TBN1120SE		2700		540
TBN1160SE		2000	0.5	650
TBN1200SE		1600		700
TBN1250SE		1300		580
TBN1300SE		1100		550

Note: For die steels, reduce the spindle speed to 80% and the feed to 75-85% respectively of the values shown above.

- No. of revolutions n (min^{-1}) = Cutting speed V_c (m/min) x 1000 ÷ 3.14 ÷ Cutter ø (mm)
- Feed speed V_f (mm/min) = n (min^{-1}) x Feed per tooth f_z (mm/t) x z (No. of inserts)

● : Stocked items

Relating pages | Technical Reference (15–1)