

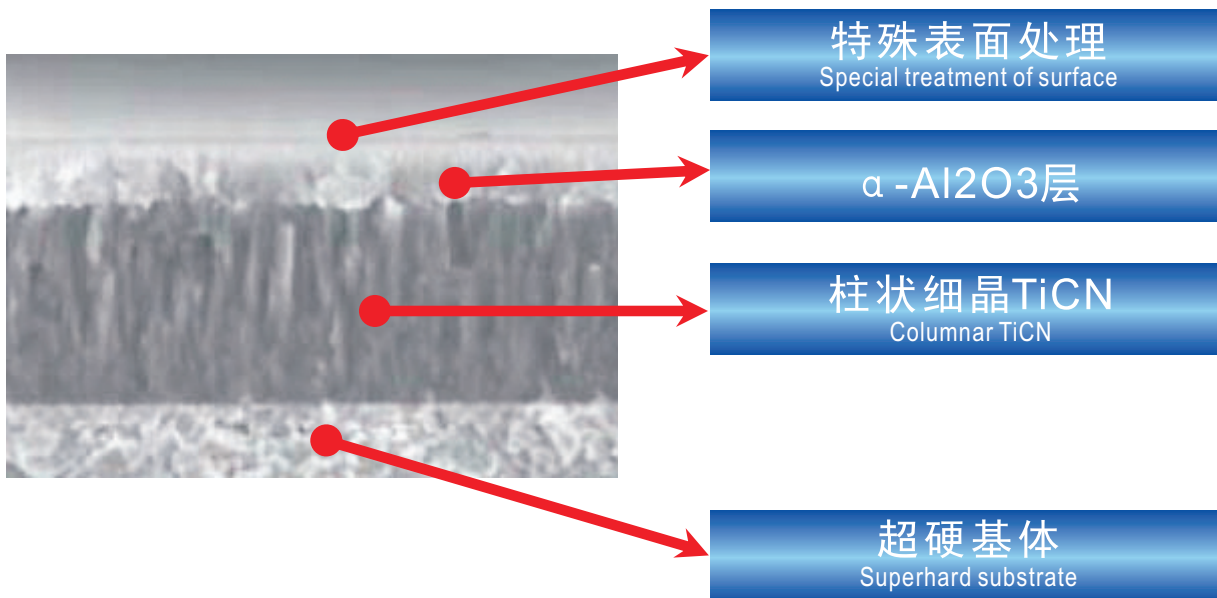
Turning Inserts For Cast Iron

The substrate of turning Inserts for cutting cast iron is ultra fine grain carbide, which is of high hardness, high abrasive resistance and cutting –edge safety. The inserts for cutting cast iron can bear shock caused by nonuniform abrasion of workpiece. The coating is CVD-MT-TiCN-Al₂O₃ owning ultra-high abrasive resistance. Such coating inserts can be used for dry cutting. The special coating treatment can reduce the coating stress, coarseness of coating surface and cutting resistance force. Grade ZPC101 from TH HARDMETAL is suitable for finishing, medium and roughing cutting of gray cast iron and ductile iron.

Trait :ultra-fine grain substrate, high hardness and strength

α -Al₂O₃ coating ,high stability and abrasive resistance.

special coating treatment ,low coating stress and coarseness of surface

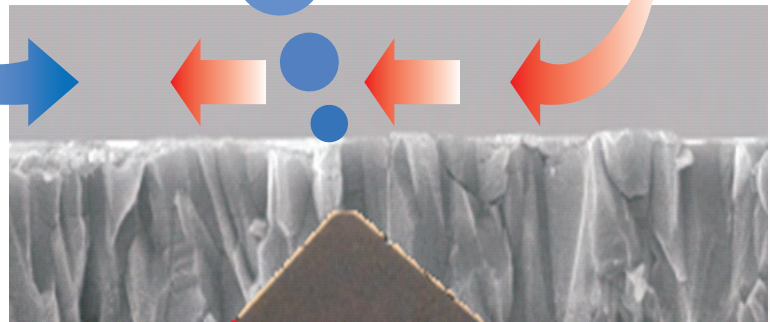
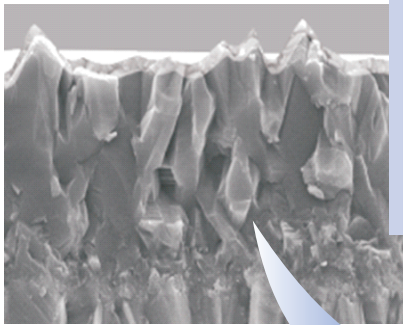


Coating Introduction

Inserts for Cast Iron

Treatment after coating improves surface quality and reduces cutting resistance force

Reduce coating stress and improve the anti-shock of coating.



Recommended Grade

K

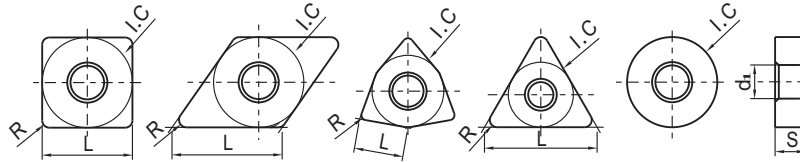
Gray Cast Iron, Ductile Iron

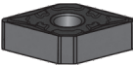
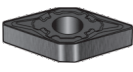
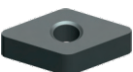
Best Application for → Recommended Grade application

		CVD Coated Grade		PVD Coated Grade		Uncoated Grade	
		ZPC051	ZPC101	ZPG101		ZK10UF	ZK20UF
Hardness ↑ ↓ Strength	K01	Red	Yellow	Blue		Red	
	K05	Red	Yellow	Blue		Red	
	K10	Red	Yellow	Blue		Red	
	K15	Red	Yellow	Blue		Red	
	K20	Yellow	Yellow	Blue		Red	
	K25	Yellow	Yellow	Blue		Red	
	K30	Yellow	Yellow	Blue		Red	
	K35	Yellow	Yellow	Blue		Red	
	K40	Yellow	Yellow	Blue		Red	

刀片材料槽型匹配				
K Gray Cast Iron Ductile Iron	Finishing		Roughing	
	Negative Inserts	CX (Finishing)	CQ (Semi-finishing)	无槽 (Roughing)
	Interrupted	ZPC101	ZPC101	ZPC101
	Cutting Speed	120-180	120-180	150-180
	Varying Depth of Cut	ZPC101	ZPC101	ZPC101
	Cutting Speed	140-260	150-260	150-280
	Good Condition	ZPC101	ZPC101	ZPC101
	Cutting Speed	150-300	150-320	120-330

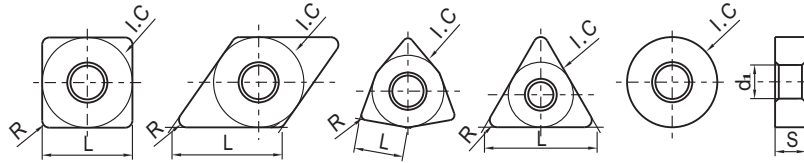
刀片材料槽型匹配				
K Gray Cast Iron Ductile Iron	Finishing		Roughing	
	Positive Inserts	CX (Finishing)	CQ (Semi-finishing)	无槽 (Roughing)
	Interrupted	ZPC101	ZPC101	ZPC101
	Cutting Speed	120-180	120-180	150-180
	Varying Depth of Cut	ZPC101	ZPC101	ZPC101
	Cutting Speed	140-260	150-260	150-280
	Good Condition	ZPC101	ZPC101	ZPC101
	Cutting Speed	150-300	150-320	120-330

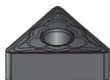
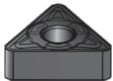


	Type			Dimension (mm)					Recommended grade		刀杆推荐	
		(ISO)	(inch)	L	ΦI.C	S	Φd ₁	R	ZPC101			
	CNMG	120404-CX	431-CX	12.9	12.7	4.76	5.16	0.4	★		MCLNR/L	
		120408-CX	432-CX					0.8	★		PCLNR/L	
		120412-CX	433-CX					1.2	★		DCLNR/L	
	CNMG	120408-CQ	432-CQ	12.9	12.7	4.76	5.16	0.8	★		MCBMR/L	
		120412-CQ	433-CQ					1.2	★		PCBMR/L	
		120416-CQ	434-CQ					1.6	★		MCKMR/L	
		160608-CQ	542-CQ	16.1	15.875	6.35	6.35	0.8	★		MCFMR/L	
		160612-CQ	543-CQ					1.2	★		MCGMR/L	
		160616-CQ	544-CQ					1.6	★		MCSMR/L	
		190612-CQ	643-CQ	19.3	19.05	6.35	7.94	1.2	★		MCMNN	
		190616-CQ	644-CQ					1.6	★		****-MCKMR/L	
	CNMA	120404	431	12.9	12.7	4.76	5.16	0.4	★		****-MCWNR/L	
		120408	432					0.8	★		****-MCLNR/L	
		120412	433					1.2	★			
		120416	434					1.6	★			
		120424	436					2.4	★			
		160612	543	16.1	15.875	6.35	6.35	1.2	★			
		160616	544					1.6	★			
		190608	642	19.3	19.05	6.35	7.94	0.8	★			
		190612	643					1.2	★			
		190616	644					1.2	★			
		190624	646					1.2	★			
	DNMG	110404-CX	331-CX	11.6	9.525	4.76	3.81	0.4	★		MDJNR/L	
		110408-CX	332-CX					0.8	★		PDJNR/L	
		150404-CX	431-CX	15.5	12.7	4.76	5.16	0.4	★		DDJNR/L	
		150408-CX	432-CX					0.8	★		MDPNN	
		150412-CX	433-CX					1.2	★		MDQNR/L	
		150604-CX	441-CX			6.35		0.4	★		****-MDQNR/L	
		150608-CX	442-CX					0.8	★		****-MDUNR/L	
		150612-CX	443-CX	1.2	★				****-MDZNR/L			
			DNMG	110408-CQ	332-CQ	11.6		9.525	4.76	3.81	0.8	★
110412-CQ	333-CQ			1.2	★							
150408-CQ	432-CQ			15.5	12.7	4.76		5.16	0.8	★		
150412-CQ	433-CQ						1.2		★			
150608-CQ	442-CQ					6.35			0.8	★		
150612-CQ	443-CQ								1.2	★		
	DNMA	150404	431	15.5	12.7	4.76	5.16		0.4	★		
		150408	432						0.8	★		
		150412	433					1.2	★			
		150608	441			6.35		0.4	★			
		150612	443					1.2	★			
		150616	443					1.2	★			

★
the 1st choice☆
the 2nd choice

Turning Inserts for Cast Iron



	Type			Dimension (mm)					Recommended grade		刀杆推荐
	(ISO)	(inch)		L	Φ I.C	S	Φ d ₁	R	ZPC101		
	SNMG	090308-CX	322-CX	9.525	9.525	3.18	3.81	0.8	★		
		120408-CX	432-CX	12.7	12.7	4.76	5.16	0.8	★		
		120412-CX	433-CX					1.2	★		
		120416-CX	434-CX					1.6	★		
		150612-CX	543-CX	15.875	15.875	6.35	6.35	1.2	★		
		150616-CX	544-CX					1.6	★		
		190612-CX	643-CX	19.05	19.05	6.35	7.94	1.2	★		
		190616-CX	644-CX					1.6	★		
	SNMA	090308	322	9.525	9.525	3.18	3.81	0.8	★		PSBNR/L
		120408	432	12.7	12.7	4.76	5.16	0.8	★		MSDNN
		120412	433					1.2	★		PSDNN
		120416	434					1.6	★		MSKNR/L
		150612	543	12.7	12.7	6.35	6.35	1.2	★		PSKNR/L
		150616	544					1.6	★		MSSNR/L
		190608	642	19.05	19.05	6.35	7.94	0.8	★		PSSNR/L
		190612	643					1.2	★		DSSSN/L
		190616	644					1.6	★		SSBCR/L
		250724	856	25.4	25.4	7.94	9.12	2.4	★		****-MSKNR/L
	TNMG	160404-CX	331-CX	16.5	9.525	4.76	3.81	0.4	★		MTQNR/L
		160408-CX	332-CX					0.8	★		MTBNR/L
			TNMG	160408-CQ	332-CQ	16.5	9.525	4.76	3.81	0.8	★
160412-CQ	333-CQ			1.2	★						MTJNR/L
220408-CQ	432-CQ			22	12.7	4.76	5.16	0.8	★		MTFNR/L
220412-CQ	433-CQ							1.2	★		MTGNR/L
220416-CQ	434-CQ							1.6	★		MTANR/L
	TNMA	160404	331	16.5	9.525	4.76	3.81	0.4	★		MTTNR/L
		160408	332					0.8	★		MTRNR/L
		160412	333					1.2	★		****-MTFNR/L
		160416	334					1.6	★		****-MTQNR/L
		220404	431	22	12.7	4.76	5.16	0.4	★		****-MTJNR/L
		220408	432					0.8	★		****-MTUNR/L
		220412	433					1.2	★		****-MTWNR/L
		220416	434					1.6	★		
		270616	544					27.5	15.875	6.35	6.35
	VNMG	160408-CQ	332-CQ	16.5	9.525	4.76	3.81	0.8	★		MVJNR/L
		160412-CQ	333-CQ					1.2	★		MVQNR/L
											MVUNR/L
											MVVNN
											****-MVQNR/L
											****-MVUNR/L
											****-MVVNR/L
											****-MVXNR/L
	****-MVVNR/L										

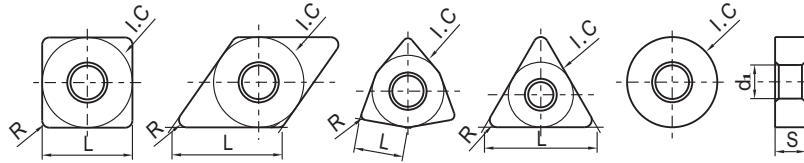
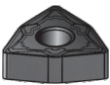
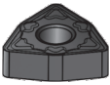
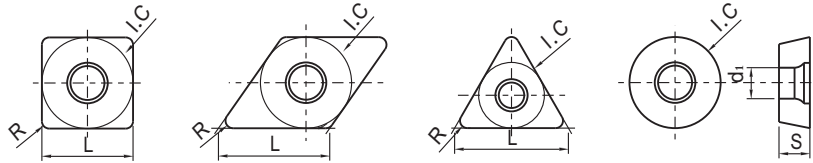


图	Type		Dimension (mm)					Recommended grade		刀杆推荐
	(ISO)	(inch)	L	Φ I.C	S	Φ d ₁	R	ZPC101		
	WNMG	060404-CX	331-CX	6.5	9.525	4.76	3.81	0.4	★	MWLNRL
		060408-CX	332-CX					0.8	★	WWLNRL
		080404-CX	431-CX	8.7	12.7	4.76	5.16	0.4	★	PWLNRL
		080408-CX	432-CX					0.8	★	DWLNRL
		080412-CX	433-CX					1.2	★	****-MWLNRL
	WNMG	060408-CQ	332-CQ	6.5	9.525	4.76	3.81	0.8	★	
		060412-CQ	333-CQ					1.2	★	
		080408-CQ	432-CQ	8.7	12.7	4.76	5.16	0.8	★	
		080412-CQ	433-CQ					1.2	★	
		080416-CQ	434-CQ					1.6	★	
	WNMA	060408	332	6.5	9.525	4.76	3.81	0.8	★	
		060412	333					1.2	★	
		080408	432	8.68	12.7	4.76	5.16	0.8	★	
		080412	433					1.2	★	
		080416	434					1.6	★	

★
the 1st choice

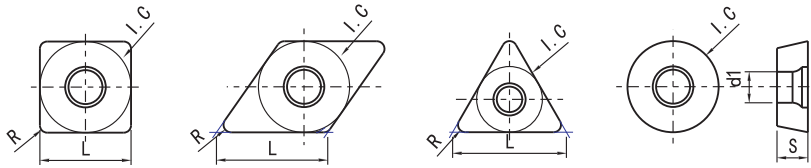
☆
the 2nd choice

Turning Inserts for Cast Iron



	Type	Dimension (mm)							Recommended grade		刀杆推荐
		(ISO)	(inch)	L	Φ I.C	S	Φ d ₁	R	ZPC101		
	CCMT	060204-CX	2(1.5)1-CX	6.4	6.35	2.38	2.8	0.4	★		SCACR/L
		09T304-CX	3(2.5)1-CX	9.7	9.525	3.97	4.4	0.4	★		SCFCR/L
	CCMT	060204-CQ	2(1.5)1-CQ	6.4	6.35	2.38	2.8	0.4	★		SCMCN
		060208-CQ	2(1.5)2-CQ					0.8	★		SCLCR/L
		09T304-CQ	3(2.5)1-CQ	9.7	9.525	3.97	4.4	0.4	★		****-SCKCR/L
		09T308-CQ	3(2.5)2-CQ					0.8	★		****-SCLCR/L
	CCMW	060204	2(1.5)1	6.4	6.35	2.38	2.8	0.4	★		****-SCZCR/L
		09T304	3(2.5)1	9.7	9.525	3.97	4.4	0.4	★		
	DCMT	070204-CX	2(1.5)1-CX	7.75	6.35	2.38	2.8	0.4	★		SDJCR/L
		11T304-CX	3(2.5)1-CX	11.6	9.525	3.97	4.4	0.4	★		SDFCR/L
	DCMT	070204-CQ	2(1.5)1-CQ	7.75	6.35	2.38	2.8	0.4	★		SDACR/L
		070208-CQ	2(1.5)2-CQ					0.8	★		SDNCN
		11T304-CQ	3(2.5)1-CQ	11.6	9.525	3.97	4.4	0.4	★		SDQCR/L
		11T308-CQ	3(2.5)2-CQ					0.8	★		****-SDWCR/L
	DCMW	11T304	3(2.5)1	11.6	9.525	3.97	4.4	0.4	★		****-SDQCR/L
									★		****-SDLCR/L
									★		****-SDUCR/L
	SCMT	09T304-CX	3(2.5)1-CX	9.525	9.525	3.97	4.4	0.4	★		SSBCR/L
		09T308-CX	3(2.5)2-CX					0.8	★		SSDCN
	SCMT	09T304-CQ	3(2.5)1-CQ	9.525	9.525	3.97	4.4	0.4	★		SSKCR/L
		09T308-CQ	3(2.5)2-CQ					0.8	★		SSSCR/L
	SCMW	09T304	3(2.5)1	9.525	9.525	3.97	4.4	0.4	★		****-SSKCR/L
		09T308	3(2.5)2					0.8	★		****-SSSCR/L
		120408	432	12.7	12.7	4.76	5.5	0.8	★		
									★		
									★		
	TCMT	090204-CX	1.8(1.5)1-CX	9.6	5.56	2.38	2.5	0.4	★		STFCR/L
		110304-CX	221-CX	11	6.35	3.18	2.8	0.4	★		STGCR/L
		16T304-CX	3(2.5)1-CX	16.5	9.525	3.97	4.4	0.4	★		STWCR/L
	TCMT	090204-CQ	1.8(1.5)1-CQ	9.6	5.56	2.38	2.5	0.4	★		****-STFCR/L
		090208-CQ	1.8(1.5)2-CQ					0.8	★		****-STUCR/L
		110304-CQ	221-CQ	11	6.35	3.18	2.8	0.4	★		****-STWCR/L
		110308-CQ	222-CQ					0.8	★		
		16T304-CQ	3(2.5)1-CQ	16.5	9.525	3.97	4.4	0.4	★		
		16T308-CQ	3(2.5)2-CQ					0.8	★		
	TCMW	110204	2(1.5)1	11	6.35	2.38	2.8	0.4	★		
		110304	221			3.18		0.4	★		
		16T304	3(2.5)1	16.5	9.525	3.97	4.4	0.4	★		
		16T308	3(2.5)2					0.8	★		

★ the 1st choice ☆ the 2nd choice



	Type			Dimension (mm)					Recommended grade		刀杆推荐
		(ISO)	(inch)	L	Φ I.C	S	Φ d _i	R	ZPC101		
	VBMT	160404-CQ	331-CQ	16.6	9.525	4.76	4.4	0.4	★		****-SVQBR/L
		160408-CQ	332-CQ					0.8	★		****-SVUBR/L
	VBMW	160404	331	16.6	9.525	4.76	4.4	0.4	★		****-SVWBR/L
											****-SVXBR/L
											****-SVZBR/L
	RCMT	0803MO-U			8	3.18	3.4		★		SRACR/L
		10T3MO-U			10	3.97	4.4		★		SRDCN
		1204MO-U			12	4.76	4.4		★		

★
the 1st choice

☆
the 2nd choice

