

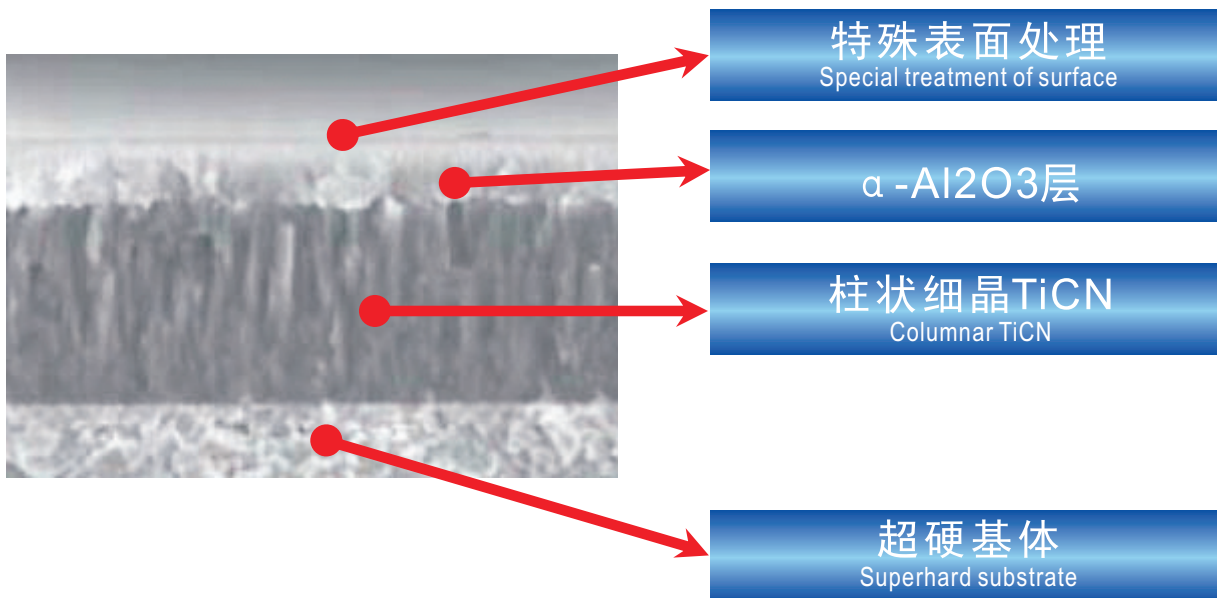
Turning Inserts For Cast Iron

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 safty The inserts for cutting cast iron can bear shock caused by nonuniform abscess 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 ZZ HARDMETAL is suitable for finishing mediam and roughing cutting of gray cast iron and ductile iron.

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

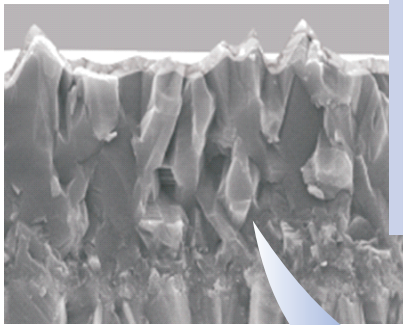
α -Al2O3 coating .high stability and abrasive resistance.

special coating treatment .low coating stress and coarseness of surface



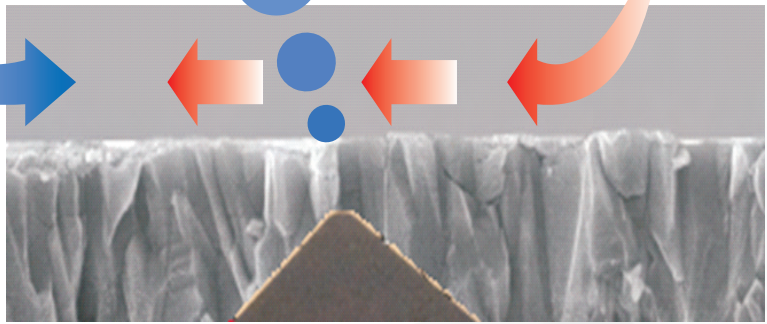
Coating Introduction

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 ↑						
K01	Red					
K05	Red				Red	
K10	Red				Red	
K15	Red	Red	Red		Red	Red
K20	Red	Red	Red		Red	Red
K25	Red	Red	Red		Red	Red
K30	Red	Red	Red		Red	Red
K35	Red	Red	Red		Red	Red
Strength ↓						
K40						

刀片材料槽型匹配

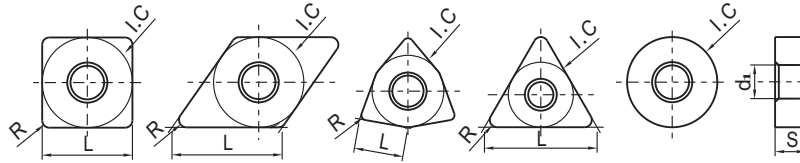
K Gray Cast Iron Ductile Iron

		Finishing		Roughing	
Negative Inserts		CX (Finishing)	CQ (Semi-finishing)	无槽 (Roughing)	
Interrupted 	Grade	ZPC101	ZPC101	ZPC101	
	Cutting Speed	120-180	120-180	150-180	
Varying Depth of Cut 	Grade	ZPC101	ZPC101	ZPC101	
	Cutting Speed	140-260	150-260	150-280	
Good Condition 	Grade	ZPC101	ZPC101	ZPC101	
	Cutting Speed	150-300	150-320	120-330	

刀片材料槽型匹配

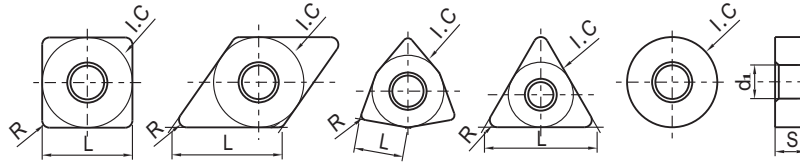
K Gray Cast Iron Ductile Iron

		Finishing		Roughing	
Positive Inserts		CX (Finishing)	CQ (Semi-finishing)	无槽 (Roughing)	
Interrupted 	Grade	ZPC101	ZPC101	ZPC101	
	Cutting Speed	120-180	120-180	150-180	
Varying Depth of Cut 	Grade	ZPC101	ZPC101	ZPC101	
	Cutting Speed	140-260	150-260	150-280	
Good Condition 	Grade	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	★		MCBNR/L
		120412-CQ	433-CQ					1.2	★		PCBNR/L
		120416-CQ	434-CQ					1.6	★		MCKNR/L
		160608-CQ	542-CQ	16.1	15.875	6.35	6.35	0.8	★		MCFNR/L
		160612-CQ	543-CQ					1.2	★		MCGNR/L
		160616-CQ	544-CQ					1.6	★		MCSNR/L
		190612-CQ	643-CQ	19.3	19.05	6.35	7.94	1.2	★		MCMNN
		190616-CQ	644-CQ					1.6	★		****-MCKNR/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					0.4	★		****-MDQNR/L
		150608-CX	442-CX			6.35	5.16	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	★		

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	Type		Dimension (mm)					Recommended grade		刀杆推荐	
	(ISO)	(inch)	L	ΦI.C	S	Φd 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	15.875	15.875	6.35	6.35	1.6	★		
		150612-CX	543-CX					1.2	★		
		150616-CX	544-CX	19.05	19.05	6.35	7.94	1.6	★		
		190612-CX	643-CX					1.2	★		
		190616-CX	644-CX	1.6	★						
	SNMA	090308	322	9.525	9.525	3.18	3.81	0.8	★		
		120408	432	12.7	12.7	4.76	5.16	0.8	★		
		120412	433					1.2	★		
		120416	434	12.7	12.7	6.35	6.35	1.6	★		
		150612	543					1.2	★		
		150616	544	19.05	19.05	6.35	7.94	1.6	★		
		190608	642					0.8	★		
		190612	643	1.2	★						
		190616	644	1.6	★						
		250724	856	25.4	25.4	7.94	9.12	2.4	★		
	TNMG	160404-CX	331-CX	16.5	9.525	4.76	3.81	0.4	★		
		160408-CX	332-CX					0.8	★		
	TNMG	160408-CQ	332-CQ	16.5	9.525	4.76	3.81	0.8	★		
		160412-CQ	333-CQ					1.2	★		
		220408-CQ	432-CQ	22	12.7	4.76	5.16	0.8	★		
		220412-CQ	433-CQ					1.2	★		
		220416-CQ	434-CQ					1.6	★		
	TNMA	160404	331	16.5	9.525	4.76	3.81	0.4	★		
		160408	332					0.8	★		
		160412	333					1.2	★		
		160416	334					1.6	★		
		220404	431	22	12.7	4.76	5.16	0.4	★		
		220408	432					0.8	★		
		220412	433					1.2	★		
		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	★		
		160412-CQ	333-CQ					1.2	★		

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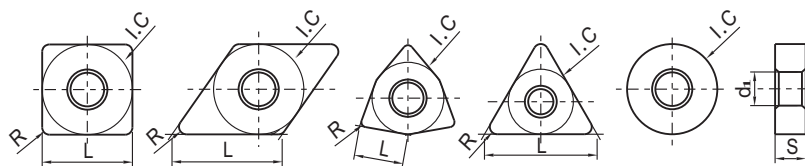
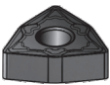
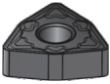

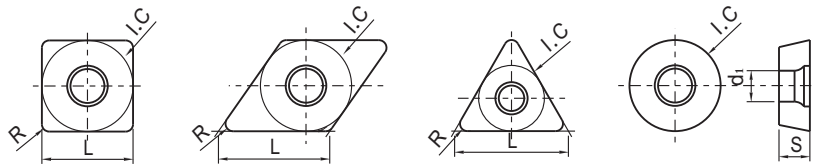


图	Type		Dimension (mm)					Recommended grade		刀杆推荐
	(ISO)	(inch)	L	ΦI.C	S	Φd _i	R	ZPC101		
	WNMG	060404-CX	331-CX	6.5	9.525	4.76	3.81	0.4	★	MWLNR/L WWLNR/L PWLNR/L DWLNR/L ****-MWLNR/L
		060408-CX	332-CX					0.8	★	
		080404-CX	431-CX	8.7	12.7	4.76	5.16	0.4	★	
		080408-CX	432-CX					0.8	★	
		080412-CX	433-CX					1.2	★	
	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	★	

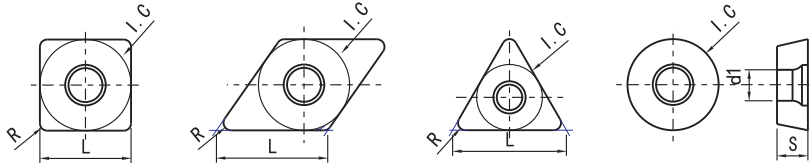
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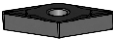




	Type		Dimension (mm)						Recommended grade		刀杆推荐	
	(ISO)	(inch)	L	ΦI.C	S	Φd ₁	R	ZPC101				
	CCMT	060204-CX	2(1.5)1-CX	6.4	6.35	2.38	2.8	0.4	★		SCACR/L	
		09T304-CX	3(2.5)1-CX	9.7	9.525	3.97	4.4	0.4	★		SCFCR/L	
	CCMT	060204-CQ	2(1.5)1-CQ	6.4	6.35	2.38	2.8	0.4	★		SCMCN	
		060208-CQ	2(1.5)2-CQ					0.8	★		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	
								0.4	★		****-SDLCR/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	★			

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	Type		Dimension (mm)						Recommended grade		刀杆推荐
	(ISO)	(inch)	L	ΦI.C	S	Φd _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		★		

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