激情飞扬　共创未来

Passion for flying to create brilliant

—XING TAI LONG—

醴陵兴泰隆特种陶瓷有限公司

产品介绍

PRODUCT INTRODUCTION

醴陵兴泰隆特种陶瓷有限公司

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醴陵兴泰隆特种陶瓷有限公司

XTL
—XING TAI LONG—

COMPANY PROFILE

公司简介

醴陵兴泰隆特种陶瓷有限公司成立于1997年，是一家集科研生产与一体的，自主研发生产企业！主要生产高纯石墨系列产品，碳化硅陶瓷系列和氮化硼系列产品。其中主要的是：碳化硅/石墨管、碳化硅/石墨/氮化硼坩埚，碳化硅球，碳化硅/石墨板，可根据客户需求开模定制各种异形产品。

产品广泛用于半导体、冶金、有色金属、家电、机械、模具、汽车、石油、化工、热电、航空航天等领域。

公司一贯坚持以质量生存,创新发展,诚信的品牌,保护和周到的售后服务企业为目标,多年来，我们的产品畅销全国，并出口德国、美国、芬兰、巴西、俄罗斯、墨西哥等二十多个国家和地区。产品质量和服务得到客户的高度认可。

“质量上乘，优惠价格”是我们的经营宗旨，我们真诚期待与广大国内外客户合作，共同发展！

欢迎您前来参观和考察。

Liling Xing Tai Long Special Ceramic Co.,Ltd was established in 1997, Specializing in research and development , manufacturing high pure graphite products, silicon carbide ceramic series and boron nitride products . Main as : SIC / graphite tube and rod , SIC / graphite / BN crucible , SIC beads , SIC / graphite plate and so on OEM / ODM are welcomed .

The products are widely used in semiconductor, metallurgy, non-ferrous metal, electrical appliances, machinery, mould, automobile, petroleum, chemical, thermal power, aerospace and other fields.

The Company always adhere to quality survival, innovation and development, the integrity of the brand, to protect and thoughtful after-sales service enterprises as the goal ,Over the years , Our products are sold well all over the Country, and exported to Germany, United States, Finland, Brazil, Russia, Mexico ... more than 20 countries . Product quality and service are highly praised by customers.

“Superior quality, Preferential price"is our management tenet, we sincerely expect to cooperate with the masses of domestic and foreign customers, common development.

Welcome to visit and Investigate of our company.

反应烧结碳化硅管和横梁系列

Reaction Sintered Silicon Carbide Tubes and Beams Serials

- **反应烧结碳化硅管**

反应烧结碳化硅管具有高导热，高密度，高强度，耐高温，耐腐蚀，抗氧化，使用寿命长等一系列优良特性。耐高温1380摄氏度，强度好，热震性好同，蓄热少，能耗低。

- **产品应用：**广泛适用于建筑，卫生，日用陶瓷，高压电瓷，磁性材料，粉末冶金，微晶玻璃等窑炉中以及电子，机械，化工，航空航天等领域。

- **常见规格：**直径8-200mm。

Reaction Sintered Silicon Carbide Tubes

Reaction sintering silicon carbide (SISIC)& sintering silicon carbide (SSIC) tubes have the characteristics of structure strength in high temperature 。Grinding resistance and high thermal conductivity . They are mainly used as the thermocouple tube in all kinds of machinery equipment . Quality of products have reached advanced international standard at present .

Applications : Widely used in construction , health ,daily ceramics ,high pressure porcelain insulator . Magnetic materials , power metallurgy , crystallite glass kiln etc . As well as in electronics ,machinery , chemical ,aerospace and other fields .

Dimensions : Diameter 8-200mm and others customized .

- **横梁系列**

抗氧化，高强度，长期使用不变形。是梭式窑、双层窑及其他工业窑炉的承重支架，电瓷、卫浴瓷行业的理想窑具。

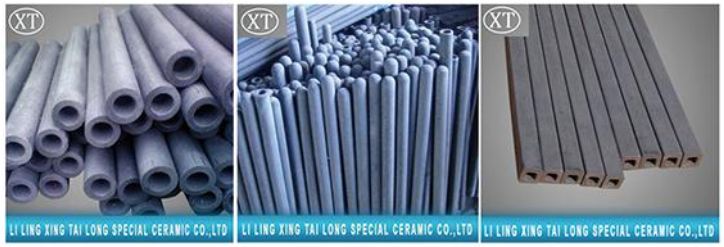
Beams Serials

Oxidation resistance,high strength no transformation in long term.Used for shuttle kiln、double kiln and other industrial kiln of bearing bracket,electrical porcelain kiln furniture,sanitary ware porcelain industry ideal.

- **物理指标 Physical Parameter**

项目 Item	单位 Unit	数值 Index
工作温度 Service temperature	℃	1380
体积密度 Bulk density	g/cm3	> 3.1
显气孔率 Porosity	%	< 0.1
抗裂强度 Rupture strength	MPA	250(20℃)
		280(1200℃)
弹性模量 Elastic modulus	GPA	330(20℃)
		300(1200℃)
导热系数 Thermal conductivity	W/m.k	45(1200℃)
硬度 Hardness	Mohs	9

OD in.	ID in.	OD mm.	ID mm.
0.375	0.250	9.53	6.35
0.750	0.500	19.05	12.70
1.000	0.750	25.40	19.05
1.625	1.375	41.28	34.93
2.000	1.750	50.80	44.45
2.250	2.000	57.15	50.80
2.750	2.500	69.85	63.50
3.250	2.875	82.55	73.03
3.750	3.375	95.25	85.73
4.000	3.625	101.60	92.08
4.750	4.375	120.65	111.13
5.000	4.625	127.00	117.48
5.250	4.875	133.35	123.86
6.500	6.125	165.10	155.58
7.000	6.625	177.80	168.28
7.500	7.125	190.50	180.98
8.250	7.875	209.55	200.03



碳化硅球
Silicon carbide ball

- **主要性能和应用**

1. 高强度、高韧性产品，轴承滚动珠，磁性材料、压电陶瓷、介电陶瓷。
2. 防止污染：医药、食品、化妆品。
3. 耐磨损、耐腐蚀产品：涂料、纺织、颜料、印染。
4. 航空航天陶瓷：电子陶瓷、耐火陶瓷、结构陶瓷。

Main performance and application

1.High strength, high toughness, bearing rolling beads, magnetic materials, piezoelectric, dielectric ceramics.

2.To prevent pollution: medical, food, cosmetics.

3.The wear resistance and corrosion products: paint, textile, paint, printing and dyeing.

4.Ceramic: aerospace electronic ceramics, refractory ceramics, structural ceramics.

- **物理指标　Physical Parameter**

Tachnical parameter 技术参数	Unit 单位	Sic	Ssic	Sic+c	Ssic+c
Hardness 硬度	HS	≧110	≧115	≧105	≧110
Porosity Rate 气孔率	%	<0.3	<0.2	<0.5	<0.5
Density 密度	G/cm3	3.00–3.05	>3.1	2.60–2.90	2.7–3.00
Compressive Strength 抗压强度	MPa	>2200	>2500	>1400	>1600
Fractural Strength 抗裂强度	MPa	>350	>380	>150	>160
Coefficient of expansion 膨胀系数	10/℃	4.00	4.20	3.50	3.00
Content of Sic 碳化硅含量	%	≧90	≧98	≧85	≧92
Elastic Modulus 弹性系数	GPa	≧400	≧410	≧350	≧360
Temperature 温度	℃	1300	1400	1300	1400

碳化硅坩埚
Silicon carbide Crucible

碳化硅坩埚有优越的耐磨性,耐腐蚀，耐温性高、抗氧化性能、优异的导热率， 使用寿命长等特点。而且在节能、环境保护领域的工业生产效率非常高。

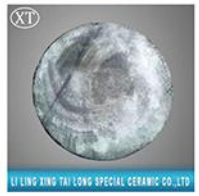
碳化硅坩埚的系列已广泛应用于电力领域的烧结和融炼, 冶金、玻璃、化工石油、环境保护等。

Silicon carbide Crucibles have superior characteristic such as wear resistance, corrosion resistance, high temperature tolerance, oxidation resistance, superior thermal conductivity,bending strength, long time service life, etc.. They are also very efficient, energy-saving, enviromental protection in the field of industrial production.

The series of Crucibles have been widely used for power sintering and melting in the fields of metallurgy, glasses, chemical industry petroleum, enviromental protection, etc.

● **物理指标** Physical Parameter

Item 项目	Specification 特点
SiC≥ 碳化硅含量	48%
Refractoriness≥ 耐火度	1650°C
Carbon≥ 含碳量	30–45%
Open Porosity≤ 气孔率	18–25%
Bulk Density≥ 体积密度	1.9–2.1g/cm3



Model	Top diameter(mm)	Bottom diameter (mm)	Height (mm)	Melting alumina (KG)
BA2500	900	500	1250	1000
BA1500	780	450	890	510
BA 1300	720	470	905	450
BA 1200	780	450	760	390
BA 1100	720	480	850	370
BA 970	720	480	730	360
BA 840	710	410	680	310
BA 700	600	350	780	310
BA 650	600	330	710	280
BA653	650	330	650	260
BA593	620	330	610	246
BA570	620	330	570	200
BA 530	580	450	640	230
BA 502	530	330	720	200
BA 501	530	330	760	220

碳化硅密封环
Silicon carbide seal ring

碳化硅密封环广泛应用于罐头泵、磁力泵、真空泵、化工、石油、冶金、选矿、混合机。

● **特点：**低密度,高强度,低的热膨胀, 高导热系数、高硬度

SIC seal ring widely used in canned pump, magnetic drive pump, vacuum pump, chemicals, petroleum, metallurgy, mineral processing, and mixing machine.

Characteristic: Low Density, High Strength, Low thermal expansion,High thermal conductivity, High hardness

● **碳化硅环参数** Sic seal rings main performance

Item 类目	Unit 单位	Sic 反映烧结碳化硅	SSIC 无压烧结碳化硅
Purity 含量	%	≥90	≥98
Density 密度	g/cm3	3.05	3.1
Shore Hardness 肖氏硬度	HS	110–125	120–130
Elastic Modulus 弹性系数	MPa	4.12x105	4.10x10s
Poisson Ratio 泊松比		0.15	0.16
Tensile Strength 抗张强度	MPa	2.75x102	2.8x102
Bending Strength 抗弯强度	MPa	4.41x102	4.9x102
Compression Strength 抗压强度	MPa	2.94x103	3.0x102
Thermal Conductivity 导热系数	W/m.k	141	147
Coefficient of Thermal Expansion 热膨胀系数	l/°C	4.3x10–6	4.0x10–6
Heat Resistance 耐热性		1600C	165CTC
Tolerance 公差	mm	–0.02––+0.02	–0.02––+0.02
Acid Resistance 耐酸性		5 times higher than the usual TC	Resist al chemical media

Various size based on customer drawing and request .

碳化硅异型件
Silicon carbide Part

● **碳化硅异型件包含：**烧嘴，脱硫烧嘴，匣钵等

除了标准产品，碳化硅材质还能用来制作各种不同异型产品，诸如烧嘴，匣钵，以及用于各种工业工程中的根据客户要求制作的零部件。

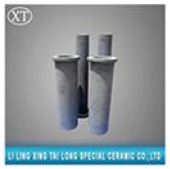
烧嘴套典型地应用于工业窑炉。

由于碳化硅材质具有优异的抗高温氧化性能和耐腐蚀耐磨性能，用其制作的换热器和高温零部件也广泛的应用于机械工程中。

In addition to standard products, silicon carbide materials also can be used to produce various different products, such as burner, sagger, and used for various parts according to customer requirements of industrial engineering.

Burner, a set of typically applied to industrial furnaces.

because the silicon carbide material has excellent high temperature oxidation resistance and corrosion resistance, abrasion, made of the heat exchanger and high temperature parts are widely used in mechanical engineering.



● **碳化硅异型件参数** Silicon carbide Part main performance

Item 类目	Unit 单位	Sic 反映烧结碳化硅	SSIC 无压烧结碳化硅
Purity 含量	%	≥90	≥98
Density 密度	g/cm3	3.05	3.1
Shore Hardness 肖氏硬度	HS	110–125	120–130
Elastic Modulus 弹性系数	MPa	4.12x105	4.10x10s
Poisson Ratio 泊松比		0.15	0.16
Tensile Strength 抗张强度	MPa	2.75x102	2.8x102
Bending Strength 抗弯强度	MPa	4.41x102	4.9x102
Compression Strength 抗压强度	MPa	2.94x103	3.0x102
Thermal Conductivity 导热系数	W/m.k	141	147
Coefficient of Thermal Expansion 热膨胀系数	l/℃	4.3x10–6	4.0x10–6
Heat Resistance 耐热性		1600C	165CTC
Tolerance 公差	mm	–0.02–~+0.02	–0.02–~+0.02
Acid Resistance 耐酸性		5 times higher than the usual TC	Resist al chemical media

陶瓷石墨坩埚
Ceramic Graphite Crucible

● **石墨坩埚的特点：**

1. 石墨坩埚良好的热稳定性：针对石墨坩埚急热急冷的使用条件，特别配方。
2. 石墨坩埚良好的耐腐蚀、耐冲击性能、以保证产品质量的可靠性。
3. 石墨坩埚良好的耐强酸 、强碱。
4. 石墨坩埚良好的热传导性能：可以极大缩短熔炼时间，节约能源。
5. 石墨坩埚的灰分小于300pp，确保贵金属在冶炼中不被污染。

Features of Graphite Crucible

1. Good thermal stability: Special formula targeting the shock heating and shock cooling use conditions of graphite crucible
2. Good corrosion resistance and impact resistance performance can ensure the reliability of product quality.
3. Good resistance to strong acid and alkali
4. Good thermal conductivity can greatly shorten the melting time and save energy.
5. The ash content of graphite crucible is less than 300pp, which can ensure that precious metal is free from pollution during smelting.

● **金属熔炼用石墨坩埚**

石墨坩埚具有优良的耐磨损性能，导热性能和导电性能等等。使用此种石墨坩埚，可以提高使用寿命，降低电流消耗，节约能源并且降低系统负荷。

Graphite Crucible for Metal Smelting

Graphite crucible has excellent wear resistance, thermal conductivity and electrical conductivity, etc. Using this graphite crucible can improve service life, reduce current consumption, save energy and reduce system load.

● **理化指标** Physicochemical Indicators

石墨材质 Graphite Material	电阻率 ≥μΩm	抗折强度 ≤Mpa	灰份 ≥%	体积密度 ≤g/cm³	抗压强度 ≤Mpa
优质High quality	8.5	11.5	0.5	1.60	20
高密High density	8.5	13	0.5	1.70	28
高纯High Purity	10	37	0.1	1.75	45
等静压Isostatic Pressing	15	40	0.3	1.80	65

注：产品可根据客户需求制定。 Note: The product is customizable

● **注意事项:**

1、石墨坩埚谨防潮湿，存放时必须放在干燥处或木架上。
2、搬运时轻拿轻放，严禁摔震。
3、使用前需在干燥设备或炉旁热烘烤，温度逐升到500℃。
4、坩埚应放在炉口平面以下避免炉盖磨损坩埚上口。
5、加料时应根据坩埚溶量，不可加料太多，太紧避免膨胀坩埚。
6、出炉工具和坩夹要符合坩埚外形，夹其中部避免局部受力损坏坩埚。
7、清除坩埚内外壁溶渣和粘焦时应轻敲避免损坏坩埚。
8、坩埚与炉壁之间应保持适当距离，坩埚应放在炉内正中。
9、使用过量助燃剂、添加剂将减少坩埚使用寿命。
10、使用过程中，每周将坩埚转动一次，可延长坩埚使用寿命。
11、避免强氧化火焰直喷坩埚侧面和底砣。

● INotes

1. Graphite crucible should be kept away from humid environment, and must be stored in a dry place or on a wooden shelf.

2. Handle it with care. Falling or shaking is strictly forbidden.

3. Roast it in drying equipment or by a furnace before use, wait till its temperature gradually rises to 500°C.

4. Crucible should be placed below the mouth of furnace to prevent the furnace lid abrading the upper edge of the crucible.

5. Feed materials according to the smelting capacity of crucible. It is not allowed to feed too many materials, in order to avoid crucible swelling.

6. The furnace discharging tools and clamps should comply with the shape of the crucible, and use the tools to clamp the middle section of the crucible to prevent local stress from damaging the crucible.

7. Knock the crucible gently while removing slags and sticky cokes on the internal and external wall of the crucible. Don't strike it heavily.

8. Keep appropriate distance between the crucible and the furnace wall. The crucible should be placed in the middle of the furnace.

9. Excessive use of combustion improver and additives will reduce the service life of crucible.

10. Rotate the crucible every week to extend its service life.

11. Prevent strong oxidation flame from reaching the side and bottom of the crucible directly.

● 标准尺寸 basic size

产品名称 Prodcut	产品尺寸 demension(mm)			
	上外径 top diameter(mm)	下外径 bottom diameter(mm)	内径 inner diameter(mm)	高度 height(mm)
1kg石墨坩埚 1kg Graphite crucible	58	47	35	88
2kg石墨坩埚 2kg graphite crucible	65	58	44	110
2.5kg石墨坩埚 2.5kg graphite crucible	65	58	44	126
3kg石墨坩埚 3kg graphite crucible	85	75	60	105
4kg石墨坩埚 4kg graphite crucible	85	75	60	130
4kg石墨坩埚 4kg graphite crucible	85	75	60	136
5kg石墨坩埚 5kg graphite crucible	100	89	69	130
5.5kg石墨坩埚 5.5kg graphite crucible	105	90	70	156
6kg石墨坩埚 6kg graphite crucible	110	97	79	174
6kg石墨坩埚 6kg graphite crucible	110	103	93	180
8kg石墨坩埚 8kg graphite crucible	115	105	84	176
8kg石墨坩埚 8kg graphite crucible	125	110	90	185

石墨板
Ceramic graphite plate

高纯石墨具有强度高、抗热震性好、耐高温、抗氧化、电阻系数小、耐腐蚀、易于精密机加工等优点，是理想的无机非金属材料。

● 用途

1.发射电子管、闸流管、汞弧整流器用石墨板、栅板；

2.半导体技术用的石墨舟皿、坩埚，电热元件，单晶炉用加热器；

3.金属气化用的石墨器皿、连续铸造用铸模、压力烧结用石墨模板、电火花用加工石墨电极等。

Characterized by high strength, good thermal shock resistance, high temperature resistance, oxidation resistance, small resistivity, corrosion resistance and easy precision machining, high-purity graphite is an ideal inorganic non-metallic material.

Applications

1. Graphite plate and grid plate for emission electron tube, thyratron and mercury arc rectifier

2. Graphite boat container, crucible and heating element for semiconductor technology, and heater for single crystal furnace

3. Graphite container for metal gasification, mold for continuous casting, graphite mold plate for pressure sintering, graphite electrode for electrical discharge machining, etc.

● 理化指标 Physicochemical Indicators

系号Item	密度 Density	气孔率 % Porosity %	抗压强度 Compressive Strength	抗折强度 Breaking Strength	电阻率 Resistivity	灰分 Ash Content	颗粒度 μm Particles
	g/cm3		MPa	MPa	μΩm	%	
	≥		≥	≥	≤	≤	
1	1.70	15	40	20	10	0.01	32
2	1.75	15	55	27	10	0.01	32
3	1.77	15	58	28	10	0.01	32
4	1.80	15	65	30	10	0.01	32
5	1.82	15	68	33	10	0.01	32
6	1.85	15	78	40	10	0.01	32
7	1.88	13	82	42	10	0.01	32
8	1.90	13	84	44	10	0.01	32

● 包装方式

出厂的高纯石墨装入防潮纸或塑料袋中于木箱内，并注明“易碎、防湿”等字样。

Package

The finished high-purity graphite is placed in a wooden box after packaged with moisture-proof paper or a plastic bag, and should be marked with “Fragile, Keep Dry”.

石墨棒
High-purity Graphite Rod

高纯石墨具有强度高、抗热震性好、耐高温、抗氧化、电阻系数小、耐腐蚀、易于精密机加工等优点，是理想的无机非金属材料。

- **用途**

1.发射电子管、闸流管、汞弧整流器用石墨板、栅板；

2.半导体技术用的石墨舟皿、坩埚，电热元件，单晶炉用加热器；

3.金属气化用的石墨器皿、连续铸造用铸模、压力烧结用石墨模板、电火花用加工石墨电极等。

The company uses high-quality low-ash materials, which are made into high-purity graphite after high temperature graphitization and ash removal. The production standards comply with JB/T 2750-2006 completely.

Characterized by high strength, good thermal shock resistance, high temperature resistance, oxidation resistance, small resistivity, corrosion resistance and easy precision machining, high-purity graphite is an ideal inorganic non-metallic material.

Applications

1. Graphite plate and grid plate for emission electron tube, thyratron and mercury arc rectifier

2. Graphite boat container, crucible and heating element for semiconductor technology, and heater for single crystal furnace

3. Graphite container for metal gasification, mold for continuous casting, graphite mold plate for pressure sintering, graphite electrode for electrical discharge machining, etc.

- **理化指标** Physicochemical Indicators

系号Item	密度 Density	气孔率 % Porosity %	抗压强度 Compressive Strength	抗折强度 Breaking Strength	电阻率 Resistivity	灰分 Ash Content	颗粒度 μm Particles
	g/cm3		MPa	MPa	μΩm	%	
	≥		≥	≥	≤	≤	
1	1.70	15	40	20	10	0.01	32
2	1.75	15	55	27	10	0.01	32
3	1.77	15	58	28	10	0.01	32
4	1.80	15	65	30	10	0.01	32
5	1.82	15	68	33	10	0.01	32
6	1.85	15	78	40	10	0.01	32
7	1.88	13	82	42	10	0.01	32
8	1.90	13	84	44	10	0.01	32

石墨环
Graphite Ring

- **实验数据** Empirical Data

- **化学成分** Chemical Component

Chemical component化学成分	C	SiO2	Al2O3	CaO	Other其他
Typical value标准值(%)	>85.0	<1.0	<1.0	<0.5	<6.0

- **技术参数** Technical parameter

Item项目	Density(g/cm3) 抗压强度	Compression stength(Mpa) 抗压强度	Shore hardness 萧氏硬度	Ashpurification PPM 灰份/纯化	Thermal Expansivity X*10-6/℃ 热膨胀系数	Max Working Temperature (℃)最大 操作温度
Index指数	1.85	86	60	500/50	4.3	>1000

PBN坩埚系列
PBN crucibles series

● **LEC坩埚**

液封直拉法（LEC）技术可生长适用于直接离子注入的高纯非掺杂半绝缘单晶或多晶等。

LEC crucibles

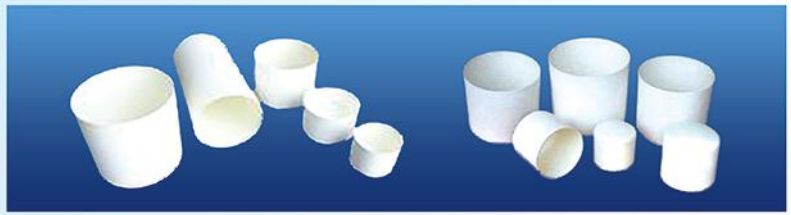
Liquid encapsulated czochralski (LEC) technique can be used for growing high-purity non-doped semi-insulating monocrystalline or polycrystalline which apply to direct ion implanted method.

● **应用**

用于LEC法合成半导体单晶及Ⅲ-Ⅴ族化合物

Application

LEC crucibles can be used to synthesize semiconductor crystal , Ⅲ-Ⅴ compounds and In - situ synthesis of GaAs、InP and GaP crystals.



● **尺寸 Sizes**

Product No（产品编号）	Application（应用）	ID(Inch)（内径）英寸	H(Inch)（高度）英寸	Taper（锥度）英寸	T(Inch)（厚度）英寸
XTL100	LEC	3	3	0.7°	0.03
XTL101	LEC	4	4	0.7°	0.035
XTL102	LEC	5	5	0.5°	0.035
XTL103	LEC	6	6	0.5°	0.04
XTL104	LEC	7	7	0.3°	0.04
XTL105	LEC	8	8	0.3°	0.04

MBE坩埚
MBE crucibles

液封直拉法（LEC）技术可生长适用于直接离子注入的高纯非掺杂半绝缘单晶或多晶等。

Molecular beam epitaxy (MBE) technology is a way to produce Gallium arsenide epitaxial wafers. This method can produce epitaxial materials with certain structures, such as multiple, multilayer, homogeneous, heterogeneous, superlattice, quantum wells and so on. The crystal has high purity, good chemical stability.

● **应用**

主要用于MBE法合成半导体单晶及Ⅲ-Ⅴ族化合物。

Application

MBE crucibles can be used to synthesize semiconductor crystal and Ⅲ-Ⅴ compounds by Horizontal directional solidification method.

● **尺寸 Sizes**

Specification 规格	Inner Diameter (mm) 内径 毫米	Lip Diameter (mm) 边缘直径 毫米	Height (mm) 高度 毫米
10cc	19	35	59.2
25cc	34	51	59.9
40cc	32.5	51	110.3
70cc	44	59.9	115
150cc	35	59.9	167
BN-110L	13	27	77
BN-125L	19.7	32	88.9
BN-135L	23.6	36.8	88.9
BN-135D	23.6	36.8	30
5cc	18.5	36.3	41
16cc	20.8	36.3	83
40cc	20.8	36.3	141
60cc	38.1	54.2	108
125cc	37.1	54.1	108
2cc	10.5	17.2	26
20cc	16.7	28.7	77
60cc	38.1	53.3	89

VGF坩埚
VGF crucibles

VGF坩埚是应用于VGF技术中的一类坩埚，垂直梯度凝固法（VGF）技术是目前最流行的技术，是微光电子和半导体产业生长GaAs单晶和InP单晶的绝佳选择。

VGF crucible is a kind of crucibles used in VGF Technology. Vertical gradient freeze method (VGF) is the most popular technology at present. It is the best choice for the growth of single crystals in the microelectronics and semiconductor industry.

- **应用**

用于VGF法合成半导体单晶及Ⅲ-Ⅴ族化合物。

Application

The crucible can be used to synthesize single semiconductor crystal and Ⅲ-Ⅴ compounds by VGF or VB method.

- **尺寸 Sizes**

Product No 产品编号	Application 应用	ID(inch) 内径 英寸	H (inch) 高度 英寸	Taper 锥度	T (inch) 厚度 英寸
XTL905	VGF	2	10	0.7°	0.035
XTL906	VGF	3	10	0.7°	0.035
XTL907	VGF	4	8	0.5°	0.035
XTL908	VGF	5	8	0.3°	0.04
XTL909	VGF	6	7	0.3°	0.04

热解氮化硼坩埚技术参数
Technical parameter of pyrolytic boron nitride crucibles

Apparent Density 密度	g/cm3	2.15 – 2.19	
Gas permeability (He) 氦透过率	cm3/s	<1 x 10–10	
Micro hardness (Knoop) 显微硬度	N/mm²	691.88 (a–b plane) (ab平面)	
Tensile strength 抗张强度	N/mm²	153.86 (parallel) (力II "C")	
Bending strength 抗弯强度	N/mm²	243.63 (parallel) (力II "C")	197.76 (perpendicular) (力⊥ "C")
Modulus of elasticity 弹性模量	N/mm²	235690	
Specific heat capacity 比热容量	cal/g.°C	0.371 (@ 200°C)	0.442 (@ 900°C)
Thermal conductivity 200℃ 热导率	W/cm.k	0.6 (parallel) (a方向)	0.026 (perpendicular) (c方向)
Thermal conductivity 900℃ 热导率	W/cm.k	0.4370 (parallel) (a方向)	0.028 (perpendicular) (c方向)
Dielectric strength (RT) (介电强度)(室温)	KV/mm	56	
Volume resistivity 体积电阻系数	.cm	3.11 x 1011	

氮化硼陶瓷
Typical application

热压氮化硼是一种优良的电绝缘体，具有极好的润滑性及高温稳定性，即便在极高的温度下，也能保持其润滑性和惰性。氮化硼的机械性相对较差，但具有很高的热容量，优异的热传导性，出众的介电强度和易加工性。在惰性气氛中，氮化硼可以承受超过2000° C的高温。热压氮化硼具有各向异性的特性，原子排列垂直于压力方向时形成强键，表现出优良的强度、热学和电学特性。原子排列平行于压力方向时形成弱键，表现出优良的润滑性。常见的氮化硼有着从固体到粉末各种不同的形态，且各形态下的性能也有差异。

Hot Pressed Boron Nitride is an excellent electrical insulator and does not require humidity to act as a lubricant. BN has poor mechanical properties, however, it generally has very high temperature heat capacity, excellent thermal conductivity, outstanding dielectric strength and easy machinability. In reducing and inert atmospheres, BN can withstand temperatures in excess of 2000℃. BN comes in a variety of different grades in solid and powder form, all with slightly differing properties.

- **氮化硼陶瓷的常见应用**

耐火材料的应用	连续铸造
甲板	热处理设备
高温润滑剂	高温阀
模具/模具脱模剂	金属和玻璃铸造
转移或雾化喷嘴	激光喷嘴
核屏蔽	感应加热线圈支架
高压绝缘体	真空炉的应用
熔融金属的坩埚和容器	

Typical application of boron nitride ceramics

Refractory applications	Continuous casting
Deck plates	Heat treatment fixtures
High temperature lubricant	High temperature valves
Molds/mold release agent	Motel metals and glass casting
Nozzles for transfer or atomization	Laser nozzles
Nuclear shielding	Induction heating coil supports
High-voltage electrical insulators	Vacuum furnace supports
Crucibles and containers for molten metals	

- **氮化硼陶瓷技术参数　Technical parameter of boron nitride ceramics**

ITEM 参数	UNIT 单位	BN 氮化硼
Type 成型工艺	–	Hot Pressed 热压
Density 密度	g/cm3	2.00 – 3.25
Color 颜色	–	white
Water Absorption 吸水率	%	0.0 – 1.0
Young Modulus 杨氏模量	Gpa	675
Hardness 硬度	Knoop(kg/mm2)	25–205
Compressive Strength 抗压强度	Mpa	100 – 500
Flexural Strength 抗弯强度	Mpa	50 – 220
Thermal Conductivity 热导率	W/m.K	20 – 50
Thermal Shock Resistance 抗热冲击强度	Δ(°C)	25 – 100
Max. Working Temperature 最高使用温度	°C	900 – 1500
Volume Resistivity 体积电阻率	Ω · cm	1013
Dielectric Constant 介电常数	1MHz(RT)	4.08
Dielectric Strength 介电强度	kV/mm	374