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CONTENTS

THE COMPANY 3-4

GRAPHITE ELECTRODE 5-6

UHP GRAPHITE ELECTRODE 7

HP GRAPHITE ELECTRODE 8

RP GRAPHITE ELECTRODE 9

GRAPHITE ELECTRODE SPECIFICATION 10

GRAPHITE ELECTRODE OPERATION GUIDE 11-12

NIPPLE 13-14

NIPPLE SPECIFICATION 15-16

GRAPHITE CRUCIBLE 17-18

GRAPHITE CRUCIBLE SPECIFICATION 19-20

GRAPHITE CLAY CRUCIBLE 21

GRAPHITE CRUCIBLE USAGE GUIDE 22-23

GRAPHITE SCRAPS 24-25

THE END 26

THE COMPANY

Hebei Gufan Carbon Co., Ltd. is a research development and manufacturing enterprise of graphite products.It has a modern management team equipped with the latest technology, machineries and technical team to cater to the needs of all clients with high production volume.

Our process control team keeps a strict vigil on the production process to safeguard all quality parameters.The best quality raw materials are used from indigenous and imported sources to ensure product quality.Stage wise 100% inspection is ensured by its inspectors and quality assurance department to prevent the processing of defective materials in the next stage of process.We have a full-fledged laboratory for testing,analysis, and development.

We provide the full range products all along, including UHP, HP and RP grade graphite electrodes,graphite crucibles and graphite scraps.

With adequate inventory and caring services, we are recognized by the general customers at home and abroad of the unanimous praise!

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GRAPHITE ELECTRODE

Graphite Electrode Grades

1. UHP Graphite Electrode

UHP Graphite Electrode is mainly used in ultra high power electric arc furnaces,its current density is allowed more than 25A/cm^2,contains 70%-100% needle coke.

- High resistance to oxidation and thermal shock
- Large currents with high discharge rate
- High resistant to cracking and spalling
- Good dimension stability
- High machining accuracy with good surface finishing
- High mechanical strength,low electrical resistance

2. HP Graphite Electrode

HP Graphite Electrode is mainly used in high power electric arc furnaces and ladle furnaces,its current density range is 18A/cm^2-25A/cm^2,contains 30%-50% needle coke.

- High purity and dinsity,strong chemical stability
- High resistance to oxidation and thermal shock
- Anti-oxidatin treatment for longevity
- High resistance on thermal and mechanical shock
- Hhigh machining accuracy with good surface finishing

3. RP Graphite Electrode

RP Graphite Electrode is mainly used inordinary power electric arc furnaces and ladle furnaces as conductive material,its current density is less than 17A/cm^2,contains 100%petroleum coke.

- Excellent resistance to breakage
- High resistance to oxidation and thermal shock
- Good dimentsin stability,not easy to deform
- High current carrying capacity
- High machining accuracy with good surface finishing
- High mechanical strength,low electrical resistance

Graphite Electrode Application








Typical Properties of UHP Graphite

Nominal Diameter		Part	Specific Resistance	Bending Strength	Young's Modulus	Bulk Density	C.T.E 100℃-600℃	Ash Content
Inch	mm		μΩ·m	MPa	GPa	g/cm^3	×10^{-6}/℃	%
Φ10	Φ250	Electrode	4.8-5.8	≥12.0	≤13.0	1.68-1.73	≤1.2	≤0.2
		Nipple	3.4-4.0	≥22.0	≤18.0	1.78-1.84	≤1.0	≤0.2
Φ12	Φ300	Electrode	4.8-5.8	≥12.0	≤13.0	1.68-1.73	≤1.2	≤0.2
		Nipple	3.4-4.0	≥22.0	≤18.0	1.78-1.84	≤1.0	≤0.2
Φ14	Φ350	Electrode	4.8-5.8	≥12.0	≤13.0	1.68-1.73	≤1.2	≤0.2
		Nipple	3.4-4.0	≥22.0	≤18.0	1.78-1.84	≤1.0	≤0.2
Φ16	Φ400	Electrode	4.8-5.8	≥12.0	≤13.0	1.68-1.73	≤1.2	≤0.2
		Nipple	3.4-4.0	≥22.0	≤18.0	1.78-1.84	≤1.0	≤0.2
Φ18	Φ450	Electrode	4.5-5.6	≥12.0	≤13.0	1.68-1.72	≤1.2	≤0.2
		Nipple	3.4-3.8	≥22.0	≤18.0	1.78-1.84	≤1.0	≤0.2
Φ20	Φ500	Electrode	4.5-5.6	≥12.0	≤13.0	1.68-1.72	≤1.2	≤0.2
		Nipple	3.4-3.8	≥22.0	≤18.0	1.78-1.84	≤1.0	≤0.2
Φ22	Φ550	Electrode	4.5-5.6	≥12.0	≤13.0	1.68-1.72	≤1.2	≤0.2
		Nipple	3.4-3.8	≥22.0	≤18.0	1.78-1.84	≤1.0	≤0.2
Φ24	Φ600	Electrode	4.5-5.4	≥10.0	≤13.0	1.68-1.72	≤1.2	≤0.2
		Nipple	3.0-3.6	≥24.0	≤20.0	1.80-1.86	≤1.0	≤0.2
Φ26	Φ650	Electrode	4.5-5.4	≥10.0	≤13.0	1.68-1.72	≤1.2	≤0.2
		Nipple	3.0-3.6	≥24.0	≤20.0	1.80-1.86	≤1.0	≤0.2
Φ28	Φ700	Electrode	4.5-5.4	≥10.0	≤13.0	1.68-1.72	≤1.2	≤0.2
		Nipple	3.0-3.6	≥24.0	≤20.0	1.80-1.86	≤1.0	≤0.2
Note:Ash content is only for reference								

Suggested Current Carrying Capacity of UHP Graphite Electrode

Nominal Diameter		Current Load	Current Density	Nominal Diameter		Current Load	Current Density
Inch	mm	A	A/m^2	Inch	mm	A	A/m^2
Φ10	Φ250	9000-14000	18-25	Φ20	Φ500	38000-55000	18-27
Φ12	Φ300	15000-22000	20-30	Φ22	Φ550	45000-65000	18-27
Φ14	Φ350	20000-30000	20-30	Φ24	Φ600	52000-78000	18-27
Φ16	Φ400	25000-40000	16-24	Φ26	Φ650	70000-86000	21-25
Φ18	Φ450	32000-45000	19-27	Φ28	Φ700	73000-96000	18-24
Note:on EAF,the current is suggested to be reduced by 10%;on LF,it might be increased by 10%							

Typical Properties of HP Graphite Electrode

Nominal Diameter		Part	Specific Resistance	Bending Strength	Young's Modulus	Bulk Density	C.T.E 100℃-600℃	Ash Content
Inch	mm		μΩ·m	MPa	GPa	g/cm³	×10⁻⁶/℃	%
Φ8	Φ200	Electrode	5.2-6.5	≥11.0	≤12.0	1.68-1.73	≤2.0	≤0.2
		Nipple	3.5-4.5	≥20.0	≤15.0	1.78-1.83	≤1.8	≤0.2
Φ9	Φ225	Electrode	5.2-6.5	≥11.0	≤12.0	1.68-1.73	≤2.0	≤0.2
		Nipple	3.5-4.5	≥20.0	≤15.0	1.78-1.83	≤1.8	≤0.2
Φ10	Φ250	Electrode	5.2-6.5	≥11.0	≤12.0	1.68-1.73	≤2.0	≤0.2
		Nipple	3.5-4.5	≥20.0	≤15.0	1.78-1.83	≤1.8	≤0.2
Φ12	Φ300	Electrode	5.2-6.5	≥11.0	≤12.0	1.68-1.73	≤2.0	≤0.2
		Nipple	3.5-4.5	≥20.0	≤15.0	1.78-1.83	≤1.8	≤0.2
Φ14	Φ350	Electrode	5.2-6.5	≥11.0	≤12.0	1.68-1.73	≤2.0	≤0.2
		Nipple	3.5-4.5	≥20.0	≤15.0	1.78-1.83	≤1.8	≤0.2
Φ16	Φ400	Electrode	5.2-6.5	≥11.0	≤12.0	1.68-1.73	≤2.0	≤0.2
		Nipple	3.5-4.5	≥20.0	≤15.0	1.78-1.83	≤1.8	≤0.2
Φ18	Φ450	Electrode	5.2-6.5	≥11.0	≤12.0	1.68-1.73	≤2.0	≤0.2
		Nipple	3.5-4.5	≥20.0	≤15.0	1.78-1.83	≤1.8	≤0.2
Φ20	Φ500	Electrode	5.2-6.5	≥11.0	≤12.0	1.68-1.73	≤2.0	≤0.2
		Nipple	3.5-4.5	≥20.0	≤15.0	1.78-1.83	≤1.8	≤0.2
Φ22	Φ550	Electrode	5.2-6.5	≥10.0	≤12.0	1.68-1.72	≤2.0	≤0.2
		Nipple	3.2-4.3	≥22.0	≤15.0	1.78-1.83	≤1.8	≤0.2
Φ24	Φ600	Electrode	5.2-6.5	≥10.0	≤12.0	1.68-1.72	≤2.0	≤0.2
		Nipple	3.2-4.3	≥22.0	≤15.0	1.78-1.83	≤1.8	≤0.2
Φ26	Φ650	Electrode	5.2-6.5	≥10.0	≤12.0	1.68-1.72	≤2.0	≤0.2
		Nipple	3.2-4.3	≥22.0	≤15.0	1.78-1.83	≤1.8	≤0.2
Φ28	Φ700	Electrode	5.2-6.5	≥10.0	≤12.0	1.68-1.72	≤2.0	≤0.2
		Nipple	3.2-4.3	≥22.0	≤15.0	1.78-1.83	≤1.8	≤0.2
Note:Ash content is only for reference								

Suggested Current Carrying Capacity of HP Graphite Electrode

Nominal Diameter		Current Load	Current Density	Nominal Diameter		Current Load	Current Density
Inch	mm	A	A/m²	Inch	mm	A	A/m²
Φ8	Φ200	5500-9000	18-25	Φ18	Φ450	25000-40000	15-24
Φ9	Φ225	6500-10000	18-25	Φ20	Φ500	30000-48000	15-24
Φ10	Φ250	8000-13000	17-27	Φ22	Φ550	34000-53000	14-22
Φ12	Φ300	13000-17500	17-24	Φ24	Φ600	38000-58000	13-21
Φ14	Φ350	17400-24000	17-24	Φ26	Φ650	45000-72000	12--19
Φ16	Φ400	21000-31000	16-24	Φ28	Φ700	48000-75000	12-18
Note:on EAF,the current is suggested to be reduced by 10%;on LF,it might be increased by 10%							

Typical Properties of RP Graphite Electrode

Nominal Diameter		Part	Specific Resistance	Bending Strength	Young's Modulus	Bulk Density	C.T.E 100℃-600℃	Ash Content
Inch	mm		μΩ·m	MPa	GPa	g/cm³	×10⁻⁶/℃	%
Φ3	Φ75	Electrode	7.5-8.5	≥10.0	≤9.3	1.55-1.64	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ4	Φ100	Electrode	7.5-8.5	≥10.0	≤9.3	1.55-1.64	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ6	Φ150	Electrode	7.5-8.5	≥10.0	≤9.3	1.55-1.64	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ8	Φ200	Electrode	7.5-8.5	≥10.0	≤9.3	1.55-1.64	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ9	Φ225	Electrode	7.5-8.5	≥10.0	≤9.3	1.55-1.64	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ10	Φ250	Electrode	7.5-8.5	≥9.0	≤9.3	1.55-1.64	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ12	Φ300	Electrode	7.5-8.5	≥9.0	≤9.3	1.55-1.64	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ14	Φ350	Electrode	7.5-8.5	≥8.5	≤9.3	1.55-1.63	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ16	Φ400	Electrode	7.5-8.5	≥8.5	≤9.3	1.55-1.63	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ18	Φ450	Electrode	7.5-8.5	≥8.5	≤9.3	1.55-1.63	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ20	Φ500	Electrode	7.5-8.5	≥8.5	≤9.3	1.55-1.63	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ22	Φ550	Electrode	7.5-8.5	≥8.5	≤9.3	1.55-1.63	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ24	Φ600	Electrode	7.5-8.5	≥8.5	≤9.3	1.55-1.63	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ26	Φ650	Electrode	7.5-8.5	≥8.5	≤9.3	1.55-1.63	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3
Φ28	Φ700	Electrode	7.5-8.5	≥8.5	≤9.3	1.55-1.63	≤2.4	≤0.3
		Nipple	5.8-6.5	≥16.0	≤13.0	≥1.74	≤2.0	≤0.3

Note:Ash content is only for reference

Suggested Current Carrying Capacity of RP Graphite Electrode

Nominal Diameter		Current Load	Current Density	Nominal Diameter		Current Load	Current Density
Inch	mm	A	A/m²	Inch	mm	A	A/m²
Φ3	Φ75	1300-2000	22-31	Φ16	Φ400	18000-23500	14-18
Φ4	Φ100	1500-2400	19-30	Φ18	Φ450	22000-27000	13-17
Φ6	Φ150	3000-4500	16-25	Φ20	Φ500	25000-32000	13-16
Φ8	Φ200	5000-7000	15-21	Φ22	Φ550	28000-34000	12-14
Φ9	Φ225	6100-8600	15-21	Φ24	Φ600	30000-36000	11-13
Φ10	Φ250	7000-10000	14-20	Φ26	Φ650	35000-48000	10-12
Φ12	Φ300	10000-13000	14-18	Φ28	Φ700	39000-49000	9-11
Φ14	Φ350	13500-18000	14-18	******			

Note:on EAF,the current is suggested to be reduced by 10%;on LF,it might be increased by 10%

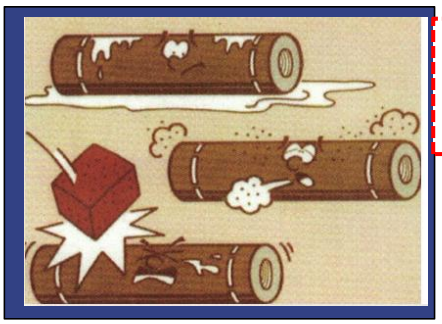
Graphite Electrode Size & Tolerance

Diameter					Length	
Nominal Diameter		Actual Diameter		Rough Spot	Nominal Length	Tolerance
mm	Inch	Max.(mm)	Min.(mm)	mm	mm	mm
Φ75	Φ3	77	74	71	1000	+50/-75
Φ100	Φ4	102	99	95	1200	+50/-75
Φ150	Φ6	154	151	147	1600	±100
Φ200	Φ8	204	201	198	1600	±100
Φ225	Φ9	230	226	223	1600/1800	±100
Φ250	Φ10	256	251	248	1600/1800	±100
Φ300	Φ12	307	302	299	1600/1800	±100
Φ350	Φ14	358	352	347	1600/1800	±100
Φ400	Φ16	409	403	400	1600/1800/2000/2200	±100
Φ450	Φ18	460	454	451	1600/1800/2000/2200	±100
Φ500	Φ20	511	505	502	1800/2000/2100/2200/2400/2700	±100
Φ550	Φ22	562	556	553	1800/2000/2100/2200/2400/2700	±100
Φ600	Φ24	613	607	604	1800/2000/2100/2200/2400/2700	±100
Φ650	Φ26	663	659	656	1800/2000/2100/2200/2400/2700	±150
Φ700	Φ28	714	710	707	1800/2000/2100/2200/2400/2700	±150

Matching Between Electric Furnace Capacity, Transformer Power Load And Electrode

Furnace Capacity (t)	Inner Diameter (m)	Transformer Capacity (MVA)			Graphite Electrode Diameter (mm)
		UHP	HP	RP	
10	3.35	10	7.5	5	300/350
15	3.65	12	10	6	350
20	3.95	15	12	7.5	350/400
25	4.3	18	15	10	400
30	4.6	22	18	12	400/450
40	4.9	27	22	15	450
50	5.2	30	25	18	450
60	5.5	35	27	20	500
70	6.8	40	30	22	500
80	6.1	45	35	25	500
100	6.4	50	40	27	500
120	6.7	60	45	30	600
150	7	70	50	35	600
170	7.3	80	60	---	600/700
200	7.6	100	70	---	700
250	8.2	120	---	---	700
300	8.8	150	---	---	700

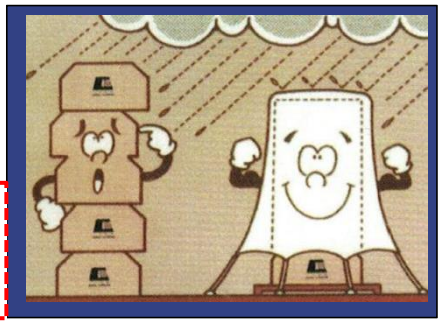
Graphite Eelctrode Operation Guide



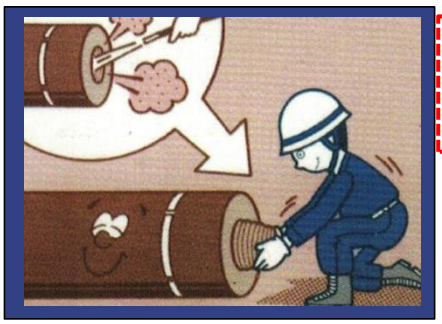
Note1: Using or stocking electrodes,avoid moisture,dust and dirt, avoid collisions lead to electrode damage.

Note2: Using a forklift to transport the electrode. Overloading and collisions are strictly prohibited, and attention to prevent slipping and breaking.

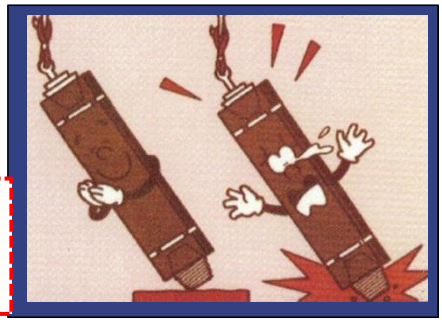
Note3: Using a bridge crane, the operator must obey the commands given. It is imperative to avoid standing under the lifting rack.



Note4: Store the electrode in a clean and dry place, and when stacked in the open field, it must be covered with a rainproof tarpaulin.

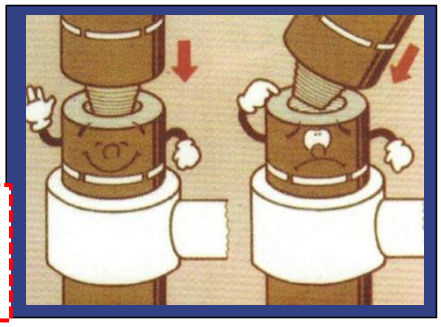


Note5: Blow off the thread of the electrode with compressed air before carefully screwing in the joint into one end.



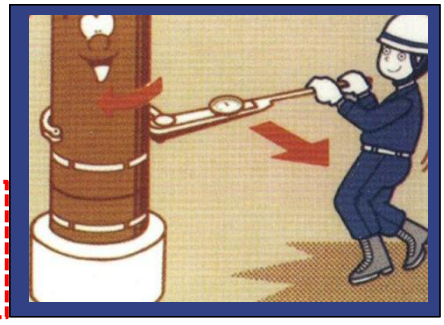
Note6: Use a rotatable hook and place a soft support pad under the electrode connector to prevent damage to the thread.

Note7: Always use compressed air to clean the hole before connecting the electrode.



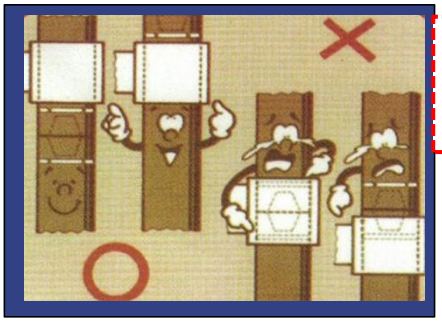
Note8: When lifting the electrode to the furnace using an elastic hook hoist, always find the center, and move down slowly.

Note9: Blow off the electrode junction when the upper electrode is lowered to a distance of 20-30 meters from the lower electrode.

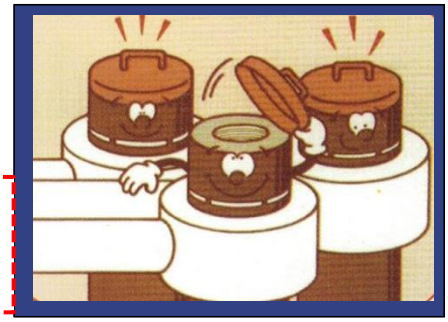


Note10: Use a recommended torque wrench to tighten.It can be tightened by mechanical means or hydraulic air pressure equipment.

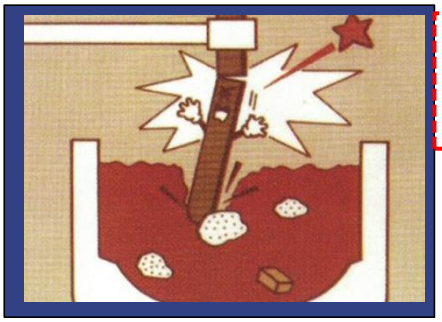
Graphite Eelctrode Operation Guide(Continuoue)



Note11: The electrode holder must be clamped within the two white warning lines.The contact surface should be cleaned.



Note12: Cover the top of the electrode to avoid oxidation and dust on the top.



Note13: No insulating material should be placed in the furnace,and the working current should be compatible with the allowable current.

Note14: To avoid electrode breaking, place the large material in the lower part and install the small material in the upper part.

Graphite Electrode Recommended Joint Torque Chart

Electrode Diameter	Torque		Electrode Diameter	Torque	
mm	ft-lbs	N·m	mm	ft-lbs	N·m
300	480	650	500	1850	2500
350	630	850	550	2570	3500
400	810	1100	600	2940	4000
450	1100	1500	700	4410	6000

Note:
When connecting two poles of electrode,avoid over pressure for electrode and cause bad effect.Please refer to the rated torque in the above chart.

Useful Tips

Using a steel electrode cover to prevent the upper part of electrode group from being oxidized by flame coming from the electrode inserting holes. The cover can prevent the electrode from being polluted by the ash coming from the electrode inserting holes.

To keep joining parts from loosening, place a nipple-pin on the nipple. At normal temperature, the pin will remain in a solid state. As the temperature rises, the melting nipple pin will bind the electrode and nipple together.

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GRAPHITE NIPPLE







Graphite Electrode Nipple

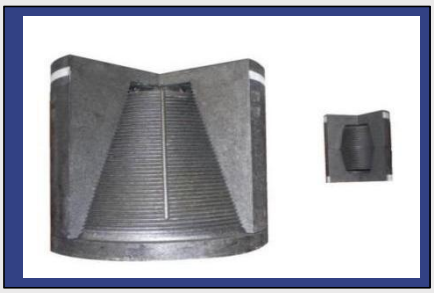
1. Overview

The graphite electrode nipple is a small but essential part of the EAF steelmaking process. It is a cylindrical-shaped component that connects the electrode to the furnace. During the steelmaking process, the electrode is lowered into the furnace and placed in contact with the molten metal. Electrical current flows through the electrode, generating heat, which melts the metal in the furnace. The nipple plays a crucial role in maintaining a stable electrical connection between the electrode and the furnace.

2. Feature

- High machining accuracy
- Bending strength limits are measured
- Good surface finishing
- High bulk density
- Precision thread accuracy

Graphite Electrode Nipple Application



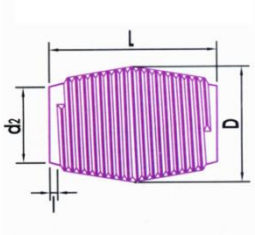



Typical Properties of Graphite Electrode Nipple

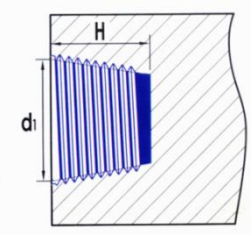
Item		Regular Power	High Power	Ultra High Power
Specific Resistance	μΩ·m	≤6.0	≤5.0	≤4.2
Bending Strength	MPa	≥15.0	≥18.0	≥20.0
Compressive Strength	GPa	≤14.0	≤18.0	≤22.0
Bulk Density	g/cm3	≥1.72	≥1.75	≥1.78
C.T.E (100℃-600℃)	×10-6/℃	≤2.5	≤4.0	≤3.0
Ash Content	%	≤0.3	≤0.3	≤0.3
Note:Ash content is only for reference				

Taper Nipple & Socket Drawing

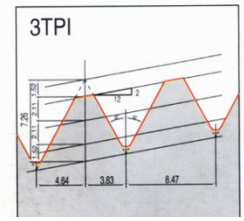
Nipple Details



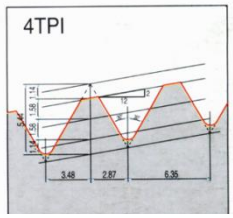
Socket Details



4TPI:Thread Details(Pictch 6.350mm)



3TPI:Thread Details(Pictch 8.467mm)



3TPI/T3N Taper Nipple & Socket Standard Dimensions(picth=8.467mm)

Nominal Diameter		IEC Code	Sizes of Nipple (mm)				Sizes of Socket(mm)		Pitch
mm	inch		D Tolerance (-0.5～0)	L Tolerance (-1～0)	d2 Tolerance (-5～0)	l	d1 Tolerance (0～0.5)	H Tolerance (0～7)	mm
250	10	155T3N	155.57	220	103.8	<7	147.14	116	8.467
300	12	177T3N	177.16	270.9	116.9		168.73	141.5	
350	14	215T3N	215.9	304.8	150		207.47	158.4	
400	16	241T3N	241.3	338.7	169.8		232.87	175.3	
450	18	273T3N	273.05	355.6	198.7		264.62	183.8	
500	20	298T3N	298.45	372.6	221.3		290.02	192.2	
550	22	298T3N	298.45	372.6	221.3		290.02	192.2	
Note:TPI(thread per inch) is the number of threads per 25.4mm(1 inch)									

4TPI/T4N Taper Nipple & Socket Standard Dimensions(picth=6.350mm)

Nominal Diameter		IEC Code	Sizes of Nipple (mm)				Sizes of Socket(mm)		Pitch
mm	inch		D	L	d2	l	d1	H	mm
			Tolerance (-0.5~0)	Tolerance (-1~0)	Tolerance (-5~0)		Tolerance (0~0.5)	Tolerance (0~7)	
200	8	122T4N	122.24	177.8	80	<7	115.92	94.9	6.35
250	10	152T4N	152.4	190.5	108		146.08	101.3	
300	12	177T4N	177.8	215.9	129.2		171.48	114	
350	14	203T4N	203.2	254	148.2		196.88	133	
400	16	222T4N	222.25	304.8	158.8		215.93	158.4	
400	16	222T4L	222.25	355.6	150		215.93	183.8	
450	18	241T4N	241.3	304.8	177.9		234.98	158.4	
450	18	241T4L	241.3	355.6	169.42		234.98	183.8	
500	20	269T4N	269.88	355.6	198		263.56	183.8	
500	20	269T4L	269.88	457.2	181.08		263.56	234.6	
550	22	298T4N	298.45	355.6	226.58		292.13	183.8	
550	22	298T4L	298.45	457.2	209.65		292.13	234.6	
600	24	317T4N	317.5	355.6	245.63		311.18	183.8	
600	24	317T4L	317.5	457.2	228.7		311.18	234.6	
650	26	355T4N	355.6	457.2	266.79		349.28	234.6	
650	26	355T4L	355.6	558.8	249.66		349.28	285.4	
700	28	374T4N	374.65	457.2	285.84		368.33	234.6	
700	28	374T4L	374.65	558.8	268.91		368.33	285.4	
Note:TPI(thread per inch) is the number of threads per 25.4mm(1 inch)									

Standard Size and Weight of Nipplee Electrode

Electrode		Standard Weight of Nipples							
Nominal Electrode Size		3TPI				4TPI			
Diameter × Length		T3N		T3L		T4N		T4L	
inch	mm	lbs	kg	lbs	kg	lbs	kg	lbs	kg
14 × 72	350 × 1800	32	14.5	-	-	24.3	11	-	-
16 × 72	400 × 1800	45.2	20.5	46.3	21	35.3	16	39.7	18
16 × 96	400 × 2400	45.2	20.5	46.3	21	35.3	16	39.7	18
18 × 72	450 × 1800	62.8	28.5	75	34	41.9	19	48.5	22
18 × 96	450 × 2400	62.8	28.5	75	34	41.9	19	48.5	22
20 × 72	500 × 1800	79.4	36	93.7	42.5	61.7	28	75	34
20 × 84	500 × 2100	79.4	36	93.7	42.5	61.7	28	75	34
20 × 96	500 × 2400	79.4	36	93.7	42.5	61.7	28	75	34
20 × 110	500 × 2700	79.4	36	93.7	42.5	61.7	28	75	34
22 × 84	550 × 2100	-	-	-	-	73.4	33.3	94.8	43
22 × 96	550 × 2400	-	-	-	-	73.4	33.3	94.8	43
24 × 84	600 × 2100	-	-	-	-	88.2	40	110.2	50
24 × 96	600 × 2400	-	-	-	-	88.2	40	110.2	50
24 × 110	600 × 2700	-	-	-	-	88.2	40	110.2	50

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GRAPHITE CRUCIBLE

Silicon Carbide Graphite Crucible

1. Silicon Carbide Crucible Overview

Silicon Carbide crucibles are made out of silicon carbide and graphite utilizing tar pitch or other synthetic resins as bonding materials.These are highly refractory products used for melting ferrous and non-ferrous metals and alloys in the foundries due to their superb inherent properties such as good thermal conductivity,low thermal expansion,resistance to thermal shocks,resistance to wetting to molten metals, etc.when compared to clay bonded graphite crucibles.These crucibles are mostly used for melting non-ferrous precious metals such as brass, copper, nickel, chromium as well as their alloys.

2. Silicon Carbide Crucible Feature

- High Mechanical Strength
- High Thermal Conductivity
- High Thermal Shock and Chemical Resistance
- Excellent Sliding Properties
- High Corrosion Resistance and Oxidation Resistance
- Long Working Service Lifetime

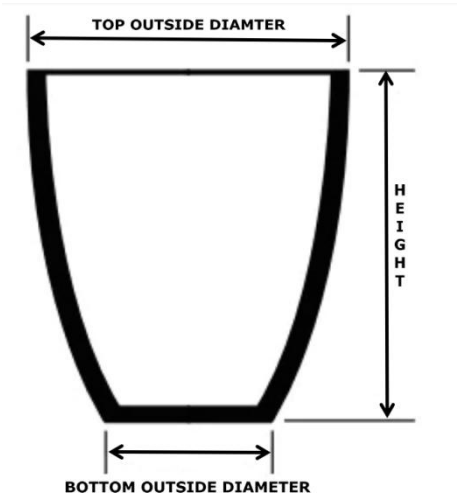
Silicon Carbide Crucible Application

- Used for metallurgy
- Used for glass manufacturing
- Metallrgical plant
- Metal sape analyss
- Furnace work tubes
- Used for power sintering and melting
- Test the content or precious metal in minerals




Silicon Carbide Crucible Specification

A Series



Specific Gravity of :

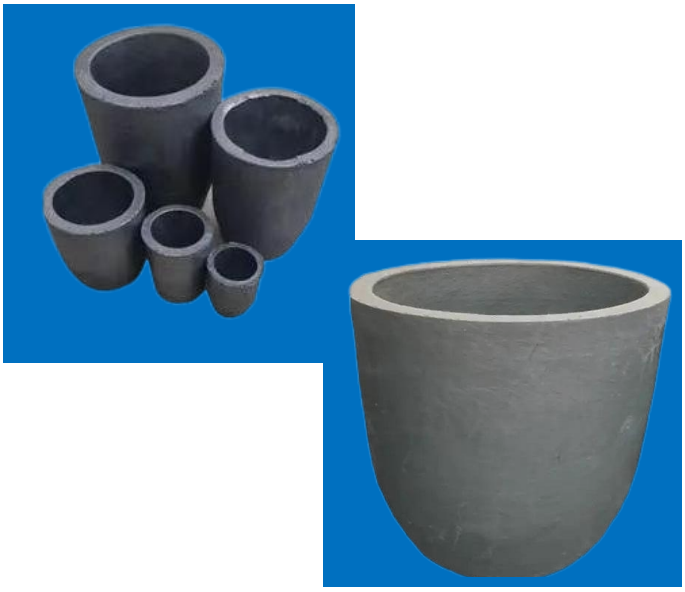
Aluminum=2.70	Silver=10.50
Brass=8.75	Gold=19.32
Copper=8.90	Tin=7.40
Cast Iron=7.10	Zinc=7.05

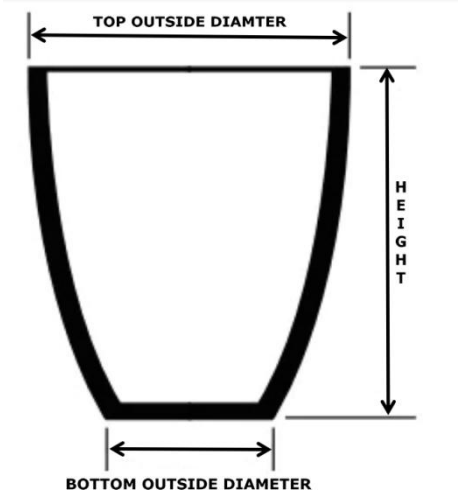
No.	Upper Outside Diameter (mm)	Bottom Outside Diameter (mm)	Height (mm)
6#-A	122	80	148
10#-A	140	93	180
12#-A	155	101	190
30#-A	220	140	270
40#-A	235	185	285
60#-A	275	190	340
80#-A	310	160	360
100#-A	340	175	417
120#-A	330	190	450
B120#-A	325	190	440
150#-A	365	210	460
B150#-A	365	210	460
C150#-A	320	225	380
D150#-A	320	225	405
180#-A	340	180	560
200#-A	420	225	550
B200#-A	400	230	500
230#-A	410	230	575
250#-A	455	255	620
B250#-A	615	260	640
260#-A	415	182	640
300#-A	465	260	680
B300#-A	450	275	655
350#-A	510	265	750
B350#-A	520	290	720
C350#-A	530	285	775
D350#-A	530	285	775
E350#-A	670	265	510
400#-A	535	275	770
B400#-A	720	310	700
500#-A	545	335	800
B500#-A	545	335	700
550#-A	650	295	650
B600#-A	780	320	750
C600#-A	600	370	810
700#-A	570	324	970
750#-A	745	300	880
B750#-A	780	320	900
800#-A	650	340	810
B800#-A	620	330	820
1000#-A	680	385	825
1200#-A	880	360	880
1300#-A	880	360	1000
1500#-A	880	360	1170

A wide rang of basis shapes and sizes are produced.Customised shapes and sizes are available on request.

Silicon Carbide Crucible Specification

B Series





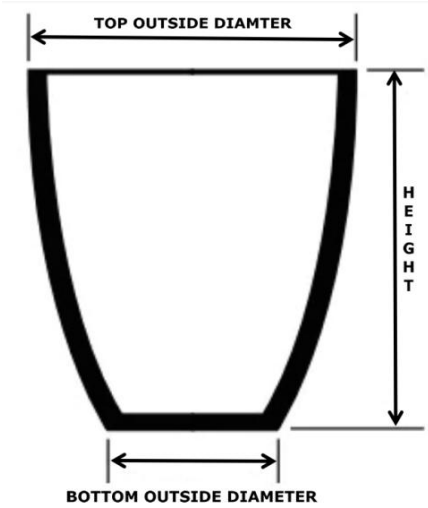
Specific Gravity of :

Aluminum=2.70	Silver=10.50
Brass=8.75	Gold=19.32
Copper=8.90	Tin=7.40
Cast Iron=7.10	Zinc=7.05

No.	Upper Outside Diameter (mm)	Bottom Outside Diameter (mm)	Height (mm)
20#-B	180	120	200
30#-B	220	150	270
60#-B	280	190	330
90#-B	310	210	350
110#-B	330	220	390
120#-B	350	230	450
200#-B	410	260	500
250#-B	430	260	540
300#-B	460	280	580
313#-B	530	310	530
353#-B	600	320	450
463#-B	580	320	600
530#-B	580	350	650
593#-B	620	320	620
653#-B	650	320	650
350#-B	470	380	680
370#-B	530	300	570
400#-B	470	380	800
450#-B	530	300	680
A500#-B	530	300	720
500#-B	530	300	750
600#-B	530	300	780
703#-B	720	350	500
700#-B	610	350	720
750#-B	610	350	780
830#-B	620	330	800
840#-B	720	400	690
850#-B	650	330	850
1000#-B	720	400	740
1200#-B	720	400	780
1300#-B	780	400	760
1400#-B	720	400	900
1500#-B	790	400	900
2000#-B	890	450	900
2000-1#-B	890	450	1000
2500#-B	900	450	1150
3000#-B	1040	550	1040
4000#-B	1040	550	1320

A wide rang of basis shapes and sizes are produced.Customised shapes and sizes are available on request.

Graphite Clay Crucible Specification



Specific Gravity of :

Aluminum=2.70	Silver=10.50
Brass=8.75	Gold=19.32
Copper=8.90	Tin=7.40
Cast Iron=7.10	Zinc=7.05

A wide rang of basis shapes and sizes are produced.Customised shapes and sizes are available on request.

No.	Upper Outside Diameter (mm)	Bottom Outside Diameter (mm)	Height (mm)
A1#	80	60	88
A2#	100	70	110
B2#	85	70	100
A3#	105	70	120
A4#	110	80	125
A5#	120	85	135
A6#	120	90	146
B6#	128	90	148
A6#（Spouted）	125	85	150
A8#	145	105	160
B8#	130	90	160
A10#	155	115	165
A12#	150	110	190
A15#	160	108	200
16#	170	120	210
18#	185	130	185
20#	190	125	230
25#	210	145	230
30#	210	150	285
40#	240	160	295
50#	260	175	300
60#	270	175	335
80#	290	210	335
100#	330	230	420
A120#	350	275	445
A150#	380	280	480
A200#	400	300	530
B200#	410	300	485
A250#	450	350	580
B250#	360	300	660
A300#	450	350	650
B300#	380	280	670
C300#	400	300	700
C310#	400	300	750
A350#	490	350	730
B350#	470	360	700
A400#	520	360	740
A500#	560	420	800
B500#	550	420	750
C500#	600	460	850
D500#	600	430	840
A650#	640	500	850
1000#	715	430	740
1200#	710	520	830
1400#	770	520	820
1500#	780	560	780
2000#	810	580	865
2200#	850	530	930
2500#	880	720	890

Graphite Crucible Usage Guide

1. Transportation and Storage of Crucibles

- The crucible should be stored in a dry place to prevent moisture
- When trasporting the crucible,appropriate transport tools just be used to avoid rolling the crucible directly
- Care must be taken when placing the crucible to avoid direct impact from external forces and bumps at the bottom.

2. Crucibles Installation in Elecric Furnace

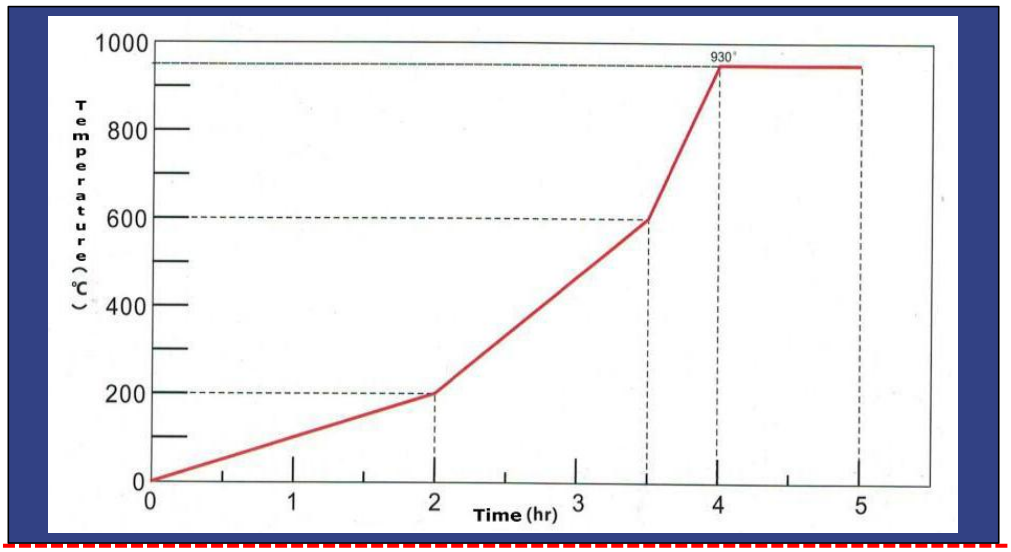
- Before installing the crucible, carefully check whether there are any cracks and other losses caused during transportation.
- The size of the crucible needs to match the furnace body to ensure the heating efficiency. and an expansion gap needs to be left on both sides of the crucible.
- The crucible must be placed strictly in the center of the furnace body.
- The filling between the crucible and the furnace body must be kept dry and avoid causing damage to the crucible during use excessive external pressure.

3. Crucibles Installation in Fuel Heating Furnace Gas Furnace

- Before installing the crucible, carefully check whether there are any cracks and other losses caused during transportation.
- The crucible must be placed appropriately to ensure that the direction of flame heating is tangent to the crucible wall and surrounds the crucible.
- The base of the crucible should be flat, slightly larger than the bottom of the crucible.

Graphite Crucible Usage Guide

4. Pre-Heating Recommendations for Silicon Carbide Crucibles



- The crucible must be preheated when used for the first time. Slowly heat the crucible to 200°C within two hours to remove any moisture that may be present in the crucible;
- Continue to slowly raise the temperature, reaching 600°C within 1.5 hours, so that the coating on the surface of the crucible is fully sintered to prevent oxidation of the crucible and maximize the service life of the crucible;
- After heating to 930°C with full power for 0.5 hours, keep warm for one hour, and then the crucible can be officially put into use;
- When the crucible is left for a long time or used again after getting damp, the crucible must be preheated again before it can be used normally.

5. Heating Recommendations for Silicon Carbide Crucibles

- Use appropriate tools carefully to avoid directly putting materials into the crucible
- The addition of additives must wait until the molten metal is completely dissolved.
- When adding materials into the crucible, some small pieces of recycled material should be added first, and then the ingot can be placed vertically added to the crucible.
- Do not allow the molten metal to solidify in the crucible.
- Crucible need to be cleaned every day be completed clean before the slag solidifies.
- The position of the crucible needs to be adjusted always.

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GRAPHITE ELECTRODE SCRAPS









Graphite Electrode Scraps

1. Overview

Graphite electrode scraps are residues generated in the process of machining or using graphite electrode.

These scraps mainly come from two sources. One is the leftover scraps generated in the process of machining graphite electrodes, while the other is the wastes generated in the process of steelmaking process or the broken fragments generated during use.

Graphite electrode scraps can be recycled and reused. Generally, not only they are used to machine graphite products, such as graphite crucibles and graphite parts, but also graphite electrode scraps are widely used as metallurgical casting industry,carbon industry,electrolytic aluminum industry,iron ore cast iron production.

2. Feature

- High purity, low resistance.
- High temperature resistance, corrosion resistance.
- Excellent electrical & thermal conductivity.
- Good oxidization resistance, thermal shock resistance.
- High machining precision.
- High carbon
- Low sulfur
- Low gray
- Low resistivity
- Low nitrogen

Graphite Electrode Scraps Application






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