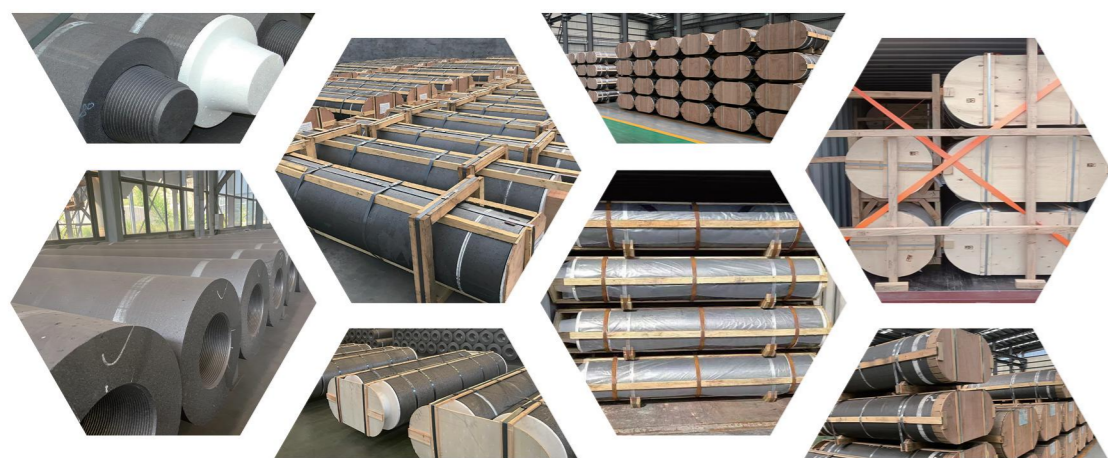


# Graphite Electrode

Graphite electrode is mainly made of petroleum coke, needle coke as raw materials, coal asphalt as a bond, calcined, mixed kneading, pressing, roasting, graphitization, machining. It is a conductor that releases electric energy in the form of arc to heat and melt the charge in electric arc furnace. There are regular power, high power and ultra-high powder. Called RP, HP and UHP graphite electrodes.



## Physical and chemical parameters of Graphite electrode and nipple

Item	Unit	Nominal Diameter, mm						
		UHP		HP		RP		
		300-500	550-800	200-500	550-800	75-600	650-800	
Resistivity	Electrode	μΩ·m	4.8-6.0	4.5-6.5	4.5-7.0	5.0-7.5	60-9.0	8.5-10.5
	Nipple	μΩ·m	3.5-5.0	3.5-5.0	3.5-5.5	3.5-5.5	4.0-7.5	4.0-7.5
Bending Strength	Electrode	M Pa	10-14	10-14	10-13	10-13	8.0-12	8.0-12
	Nipple	M Pa	20-24	22-26	18-20	20-23	18-20	20-22
Young's modulus	Electrode	G Pa	9.0-13	10-14	8.0-10	9.0-12	7.0-9.0	8.0-10
	Nipple	G Pa	15-18	16-19	14-15	15-16	12-14	12-14
Bulk Density	Electrode	g/cm <sup>3</sup>	1.68-1.74	1.68-1.74	1.66-1.72	1.66-1.72	1.58-1.68	1.58-1.68
	Nipple	g/cm <sup>3</sup>	1.77-1.82	1.78-1.84	1.74-1.80	1.74-1.80	1.70-1.74	1.70-1.74
CTE (100-600°C)	Electrode	10 <sup>-6</sup> °C	1.1-1.4	1.1-1.4	1.6-1.9	1.6-1.9	2.2-2.8	2.2-2.8
	Nipple	10 <sup>-6</sup> °C	0.9-1.2	0.9-1.2	1.1-1.4	1.1-1.4	2.0-2.5	2.0-2.5
Ash		%	≤0.3	≤0.3	≤0.3	≤0.3	≤0.5	≤0.5

Note: The data in the table represent the guaranteed value and typical value of the product. If users have special requirements, they may discuss it separately.

## Permissible Current Load and Current Density of Graphite Electrode

Dia		UHP		HP		RP	
mm	inch	A	A/cm <sup>3</sup>	A	A/cm <sup>2</sup>	A	A/cm <sup>2</sup>
75	3"	/	/	/	/	1000-1400	22-31
100	4"	/	/	/	/	1500-2400	19-30
130	5"	/	/	/	/	2200-3400	17-26
150	6"	/	/	/	/	3000-4500	16-25
200	8"	/	/	5500-9000	18-25	5000-6900	15-21
225	9"	/	/	6500-10000	18-25	6000-7000	15-21
250	10"	9200-15100	21-30	8000-13000	18-25	7000-10000	14-20
300	12"	15000-22000	20-30	13000-17400	17-24	10000-13000	14-18
350	14"	20000-30000	20-30	17400-24000	17-24	13500-18000	14-18
400	16"	25000-40000	19-30	21000-31000	16-24	18000-23500	14-18
450	18"	32000-45000	19-27	25000-40000	15-24	22000-27000	13-17
500	20"	38000-55000	18-27	30000-48000	15-24	25000-32000	13-16
550	22"	45000-65000	18-27	34000-53000	14-22	28000-34000	12-14
600	24"	50000-75000	18-26	38000-58000	13-21	30000-36000	11-13
650	26"	60000-85000	18-25	41000-65000	12-20	32000-39000	10-12
700	28"	70000-120000	18-30	45000-72000	12-19	34000-42000	9-11

## Shape size of graphite electrode

Nominal dia	Actual dia	Actual dia			Nominal length and tolerance
		mm	inch	Min Crust Dia	
75	3"	78	73	72	1000/1200/1400/1600±100
100	4"	108	100	97	1000/1200/1400/1600/1800/2000±100
130	5"	132	127	126	1000/1200/1400/1600/1800/2000±100
150	6"	154	149	146	1200/1400/1600/1800/2000±100
175	7"	179	174	171	1200/1400/1600/1800/2000±100
200	8"	205	200	197	1600/1800/2000±100
225	9"	230	225	222	1600/1800/2000±100
250	10"	256	251	248	1600/1800/2000±100
300	12"	307	302	299	1600/1800/2000/2200±100
350	14"	358	352	349	1600/1800/2000/2200±100
400	16"	409	403	400	1800/2000/2200/2400±100
450	18"	460	454	451	1800/2000/2200/2400±100
500	20"	511	505	502	1800/2000/2200/2400±100
550	22"	562	556	553	1800/2000/2200/2400±100, 2700±200
600	24"	613	607	604	1800/2000/2200/2400±100, 2700/3000±200
650	26"	663	659	656	1800/2000/2200/2400±100, 2700/3000±200
700	28"	714	710	707	1800/2000/2200/2400±100, 2700/3000±200
750	30"	765	761	758	1800/2000/2200/2400±100, 2700/3000±200
800	32"	816	812	809	1800/2000/2200/2400±100, 2700/3000±200

## Calcined Petroleum Coke

Calcination of petroleum coke is the calcination of delayed coke extracted from refinery. Although calcined petroleum coke has higher sulfur and nitrogen content than asphalt coke, its price advantage also makes it widely used as a kind of carburizing agent in steelmaking and foundry materials.

Mode Number	F.C.	S	Ash	V.M.	Moisture	Nitrogen	True Density
DAH-CPC-98.5	98.5	0.5	0.5	0.5	0.5	0.30-0.80	2.04-2.08
DAH-CPC-98.5	98.5	0.7	0.5	0.5	0.5	0.30-0.80	2.04-2.08
DAH-CPC-98.5	98.5	1.5	0.5	0.8	0.5	0.30-0.80	2.04-2.08
DAH-CPC-98.5	98.5	2	0.5	0.8	0.5	0.30-0.80	2.04-2.08
DAH-CPC-98.5	98.5	3	0.5	0.8	0.5	0.30-0.80	2.04-2.08
DAH-CPC-(97-98.5)	97-98.5	0.5-3.5	0.5-0.8	0.5-0.8	0.5	0.30-0.80	2.04-2.08
Size	1-3mm, 1-5mm, 0-1mm, 2-8mm, 8-25mm, 90% min or according to customers' requirements						
Packing	In 25kgs bag/1000kgs or 900kgs big bag						



## Graphitized Petroleum Coke

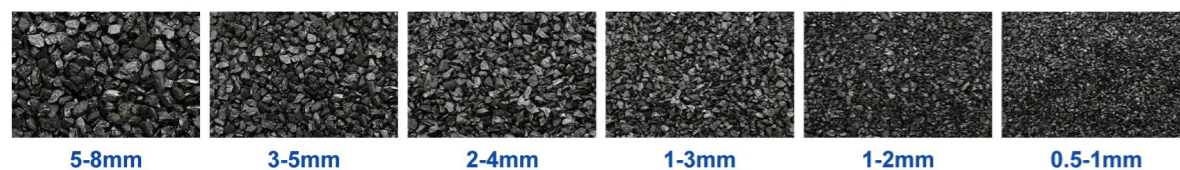
Graphite recarburizer refers to the carbon product through high temperature to make its molecular structure regular arrangement, so that the molecular spacing of carbon is wider, more conducive to decomposition in liquid iron or liquid steel. Graphite electrode scrap, Graphite powder and Graphitized petroleum coke are widely used in the steel-making industry.

Mode Number	F.C.	S	Ash	V.M.	Moisture	Nitrogen
DAH-GPC-99	99	0.03	0.5	0.5	0.5	100-500
DAH-GPC-98.5	98.5	0.05	0.5	0.5	0.5	100-300
DAH-GPC-98.5	98.5	0.05	0.8	0.5	0.5	100-300
DAH-GPC-97-98.5	97-98.5	0.5	0.5	0.80-1	0.5	3000-8000
Size	0-1mm, 1-3mm, 1-5mm, 2-8mm, 8-25mm, 90% min or according to customers' requirements					
Packing	In 25kgs bag/1000kgs or 900kgs big bag					

## Calcined Anthracite Coal

Anthracite coal, known for its high carbon content and low volatile matter, undergoes a heat treatment process to produce Calcined Anthracite Coal. The calcination process involves subjecting raw anthracite to high temperatures, driving off volatile components and enhancing its carbon content. It is also widely used in the steel-making industry.

Mode Number	F.C.	S	Ash	V.M.	Moisture	P(max)
DAH-CAC-85	85	0.3	13.5	1.5	0.5	0.03
DAH-CAC-88	88	0.3	10.5	1.5	0.5	0.03
DAH-CAC-90	90	0.3	8.5	1.5	0.5	0.03
DAH-CAC-91	91	0.3	7.5	1.5	0.5	0.03
DAH-CAC-92	92	0.3	6.5	1.5	0.5	0.03
DAH-CAC-93	93	0.3	5.5	1.5	0.5	0.03
DAH-CAC-94	94	0.3	4.5	1.5	0.5	0.03
DAH-CAC-95	95	0.3	3.5	1.5	0.5	0.03
Size	1-4mm,2-5mm,5-8mm,2-8mm,0-25mm,90% min or according to customers' requirements					
Packing	In 20kgs/25kgs bag or 1000kgs big bag					



## Graphite Powder

Natural flake graphite is produced by chemical processing and heating and drying of natural rocks, while artificial graphite powder is a product of graphitization of petroleum coke.

Carbon (%)	80%-99%
Ash (%)	≤0.3
Volatile Matter(%)	≤0.3
Sulfur Content(%)	≤0.05
Moisture (max.)	0.5
Size (mm)	80-300mesh,2-10micron



Our factory covers an area of 88000 square meters, construction area of 42800 square meters with company's total assets of 600 millions.

We have two complete sets of production line from calcining, forming, baking, impregnation, secondary baking, graphitization, machining to product packaging.

Annual comprehensive production capacity of 60000 tons. The main products are UHP, HP, RP graphite electrode and GPC/CPC/CAC, and other graphite products.

We ship goods to Middle East, South East Asia and Central Asia regularly.

Fine management, fine craftsmanship is our constant creed.

Sincere cooperation, mutual benefit and win-win is our eternal purpose.

Hope to establish long terms cooperation with you.

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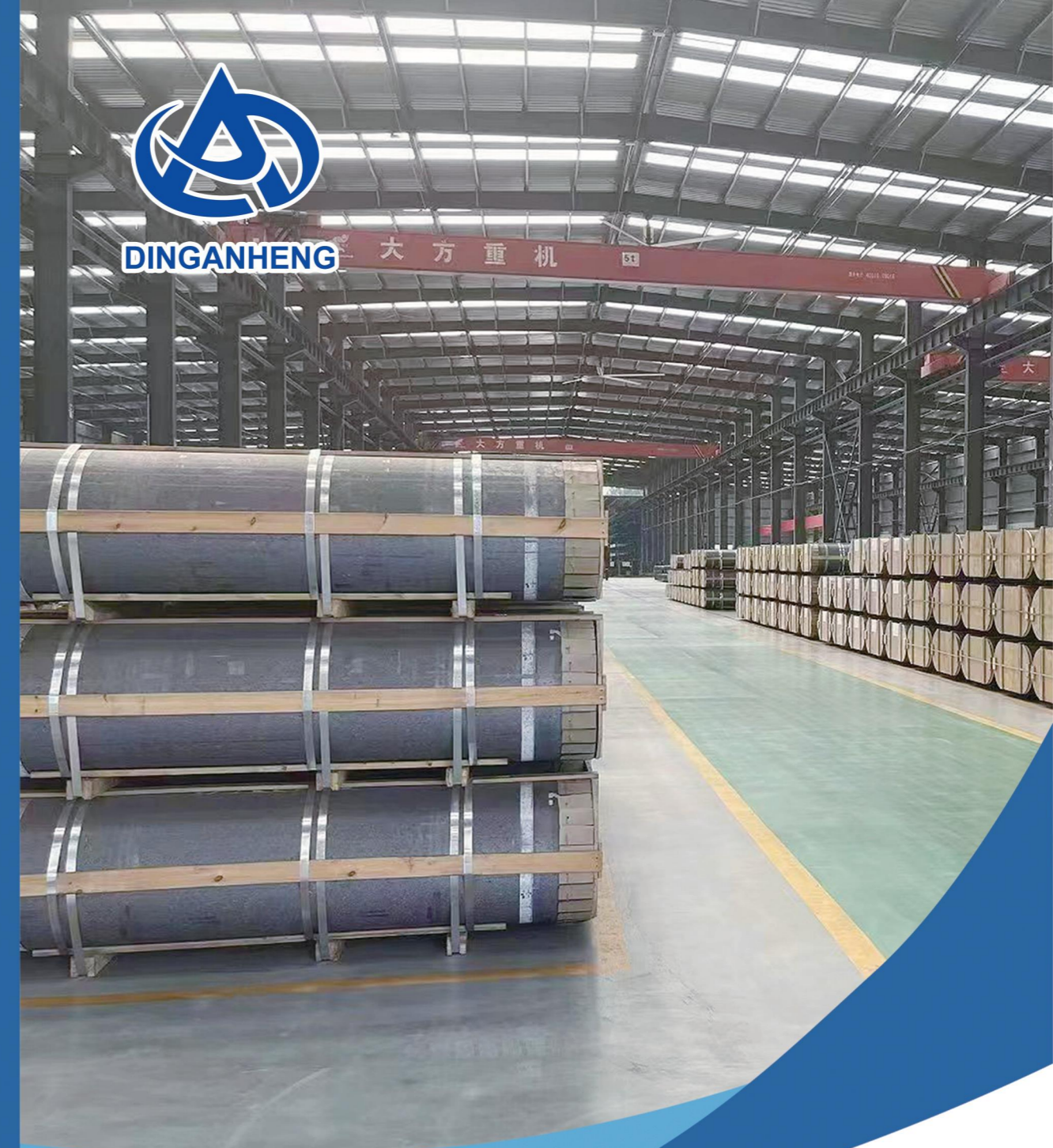
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