

High Quality Graphite Rod

We also supply large-diameter graphite rods, which are widely processed into graphite crucibles and various custom graphite components.

Tennry Carbon concentrates on technological innovation and customized production services for finished graphite products. We excel in drawing-based structural design, high-purity material application, efficient processing optimization, stable delivery assurance and personalized sample customization.

We uphold in-depth customer collaboration throughout the whole design and production process. Supported by a professional technical team and advanced design equipment, we provide full-cycle technical support, from initial demand confirmation and drawing optimization to mass production and final product delivery.

High-Purity Raw Materials & Reliable Quality System

All our graphite rods adopt premium high-purity graphite as the core raw material. Strict standardized quality control ensures the products fully meet the stringent performance requirements of diverse industrial scenarios. Meanwhile, our complete supply chain management and mature logistics system guarantee stable product quality and timely delivery.

Graphite Rod Specifications Range

Diameter: 2mm - 280mm

Length: 30mm - 2000mm

Core Performance Characteristics of Graphite Rods

1. Excellent High-Temperature Resistance

Graphite is one of the best high-temperature resistant materials available. Its melting point reaches $3850^{\circ}\text{C} \pm 50^{\circ}\text{C}$, and the boiling point is up to 4250°C . Under an ultra-high temperature arc of 7000°C , graphite suffers minimal ablation loss, with only 0.8% weight loss within 10 seconds. It maintains stable physical performance under extreme high-temperature conditions.

2. Superior Thermal Shock Resistance

Thanks to its extremely low thermal expansion coefficient, graphite rods feature outstanding thermal shock resistance. They will not crack or deform drastically under sudden temperature changes, adapting to frequent hot and cold alternating working environments.

3. Outstanding Thermal & Electrical Conductivity

Graphite boasts excellent thermal and electrical conductivity, far superior to most conventional materials. Its conductivity is 4 times that of stainless steel, 2 times that of carbon steel, and 100 times that of ordinary non-metallic materials, making it an ideal conductive and heat-conductive industrial material.

4. Excellent Self-Lubricating Performance

Graphite has reliable lubricating properties comparable to molybdenum disulfide, with a friction coefficient lower than 0.1. The lubricating effect is positively correlated with graphite flake size: larger graphite flakes deliver a lower friction coefficient and better lubrication performance, effectively reducing component wear.

5. Stable Chemical Inertness

Graphite exhibits excellent chemical stability at room temperature, resisting corrosion from most acids, alkalis and organic solvents. It will not react easily with conventional chemical media, ensuring long-term stable service life in harsh chemical working conditions.

Main Applications

Our graphite rods are widely applied in metallurgy, chemical industry, electrical engineering and mechanical manufacturing fields.

Technical index:

Isostatic graphite technical data

Index	Units	FSDK-4	FSDK-6 S	FSDK-7	FSDK-8	FSDK-9	FSDW-7	FSDW-8
Bulk density	≥g/cm ³	1.72	1.86	1.83	1.86	1.9	1.85	1.91
Electric resistivity	μ Ω .m	10-13	10-13	11-14	10-14	10-14	11-13	11-13
Compressive strength	Mpa	65	100	110	120	125	115	135
Flexural strength	Mpa	30	48	50	55	60	51	60
Shore hardness		40	65	67	72	75	65	70
Ash content/ purification	ppm	500/50	500/50	500/50	500/50	500/50	500/50	500/50
Average granularity	μ m	25	12	8	6	2-4	8-10	8-10
Coefficient of thermal expansion	× 10 ⁻⁶ /°C	5	4.2	3.8	4	3.9	5.6	5.85
Young's modulus	Gpa	9.2	11	11	12	12	11	12
Applications		>Vacuu	>Photo	>EDM	>EDM	>EDM	>EDM	>EDM

		m furnace >Sintering	voltaic >Vacuum furnace >Melting gold crucible		>Melting gold crucible	>Melting gold crucible	>Photovoltaic	>Photovoltaic
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Mold graphite technical data

Index	Units	FSM-1	FSM-2	FSMK-3	FSMK-5	FSMK-5S	FSMW-4	FSMW-5
Bulk density	$\geq$ g/cm ³	1.6	1.7	1.68	1.8	1.85	1.75	1.85
Electric resistivity	$\mu \Omega \cdot m$	8	7.5	9-13	8-10	8-10	8.5	8.5
Compressive strength	Mpa	28	36	45	70	80	65	85
Flexural strength	Mpa	14	18	20	35	40	38	46
Shore hardness		25	30	35	48	55	42	48
Ash content/ purification	ppm	2000/-	2000/-	1000/50	1000/50	1000/50	1000/50	1000/50
Average granularity	μm	2000, 4000	800,2000	15-45	15-45	15-45	14-45	14-45
Coefficient of thermal expansion	$\times 10^{-6}/^{\circ}C$	5.8	5.7	5.7	4.9	4.8	5.46	4.75
Young's modulus	Gpa	7	8	8	9.5	10	9	11.8

Product Name	Industry	Application
Crucible, Boat, Dish, etc.	Metallurgy	Melting, refining and analysis
Dies, Molds, Ingot Chassis, etc.		EDM graphite electrodes, semiconductor manufacturing, iron, steel and nonferrous metal making, continuous casting, metallurgy pressing machine
Graphite Roller, etc.		Heat treatment of steel plate in furnace
Conduit, Skateboard, etc.		Aluminum molding
Graphite Pipe		Guard pipe for measuring

		temperature, blowpipe, etc
Graphite Block		Masonry furnace and other heat resistance material
Chemical Equipment		Heat exchanger, reaction tower, distillation columns, absorption equipment, centrifugal pumps, etc
Electrolytic Plate	Chemistry	Salt solution and baking molten salt electrolyte
Electrolytic Mercury		NaCl electrolyte
Grounded Anode		Electrical anticorrosion
Motor Brush		Commutator, slipping ring
Current Collector	Electricity	Skate, slide, trolley
Contact		Switches, relays
Mercury Ferry And Electronic Pipe	Electronics	Anode, grid pole, repeller pole, ignition pole of the Mercury rectifier and anode, grid electrode
Graphite Bearing		High temperature resistance sliding bearing
Sealing Element	Machinery	Sealing ring, stuffing box seal, packing seal
Product Element		Braking in plane and vehicle

FAQ

1. When can I get the price?

We usually provide a formal quotation within 24 hours after receiving your detailed requirements, including product size, quantity and other specifications. For urgent inquiries, you are welcome to contact us directly by phone.

2. Do you provide samples?

Yes, we support sample orders for your quality inspection and testing. The sample lead time is about 7-10 working days.

3. What is the mass production lead time?

The production cycle depends on your order quantity, normally 7-12 working days for standard orders. For graphite products that require a dual-use item license, the approval process takes around 45 working days.

4. What delivery terms do you accept?

We support mainstream international trade terms including FOB, CFR, CIF and EXW. You can choose the most suitable shipping solution according to your needs. Air freight and express delivery services are also available.

5. What about product packaging?

Our products are packed with sturdy customized wooden cases for safe transportation. Custom packaging solutions based on your specific requirements are also acceptable.
We sincerely look forward to establishing long-term cooperation with you!