RuiTong

Carbon

Our Journey: From Inception to Industry Leader

Hebei RuiTong Carbon Co., Ltd. (also known as RT Carbon) was founded in July 1985 and is headquartered in Cheng'an, Handan, Hebei Province—the heart of North China's carbon production base. As the largest carbon-products enterprise in Hebei Province, RT Carbon has evolved from a small regional manufacturer into a leading global supplier of graphite electrodes and related carbon products. Over nearly four decades, the company has continuously invested in both production capacity and technological innovation to meet the ever-growing demand for high-quality carbon materials in metallurgical, electronic, and industrial applications.

Milestones Timeline: Charting Our Progress

July 1985

RT Carbon (Hebei Ruitong Carbon Co., Ltd.) is established in Cheng'an County, Handan, leveraging the region's abundant raw- material supply and robust transportation network via the Beijing–Guangzhou Railway and National Road 107

2012

The company is listed on the Tianjin Equity Exchange (Stock Code 613021), signaling a new era of capital- backed expansion and modernization

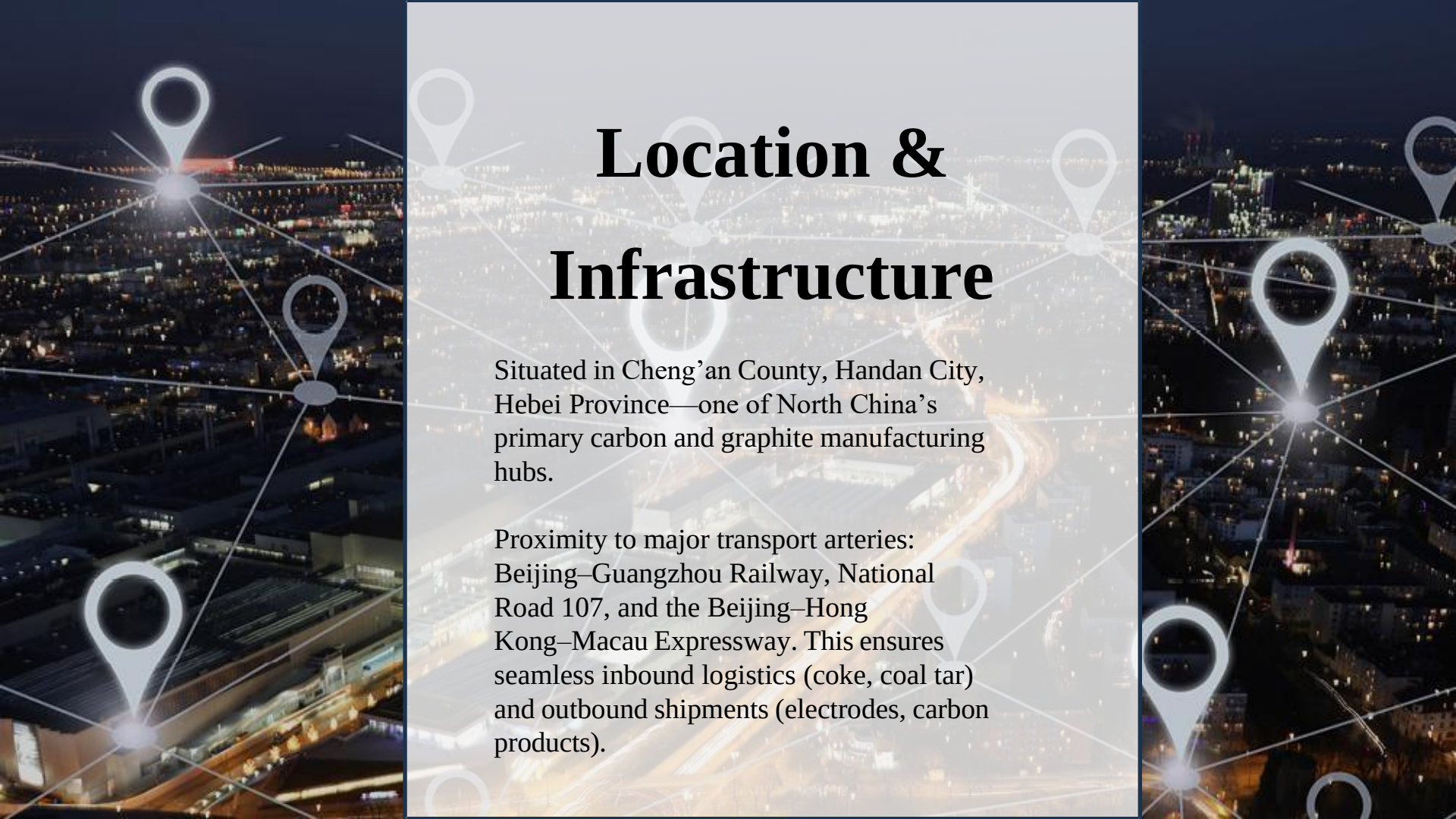
2014

Joins ECPlaza, further enhancing its global outreach as an export- oriented manufacturer

Present

RT Carbon operates on a 42,000 m² site, maintains over 170 employees (including 21 technical experts), and produces approximately 20,000 metric tons of graphite electrodes annually

Factory & Production Capacity



Location & Infrastructure

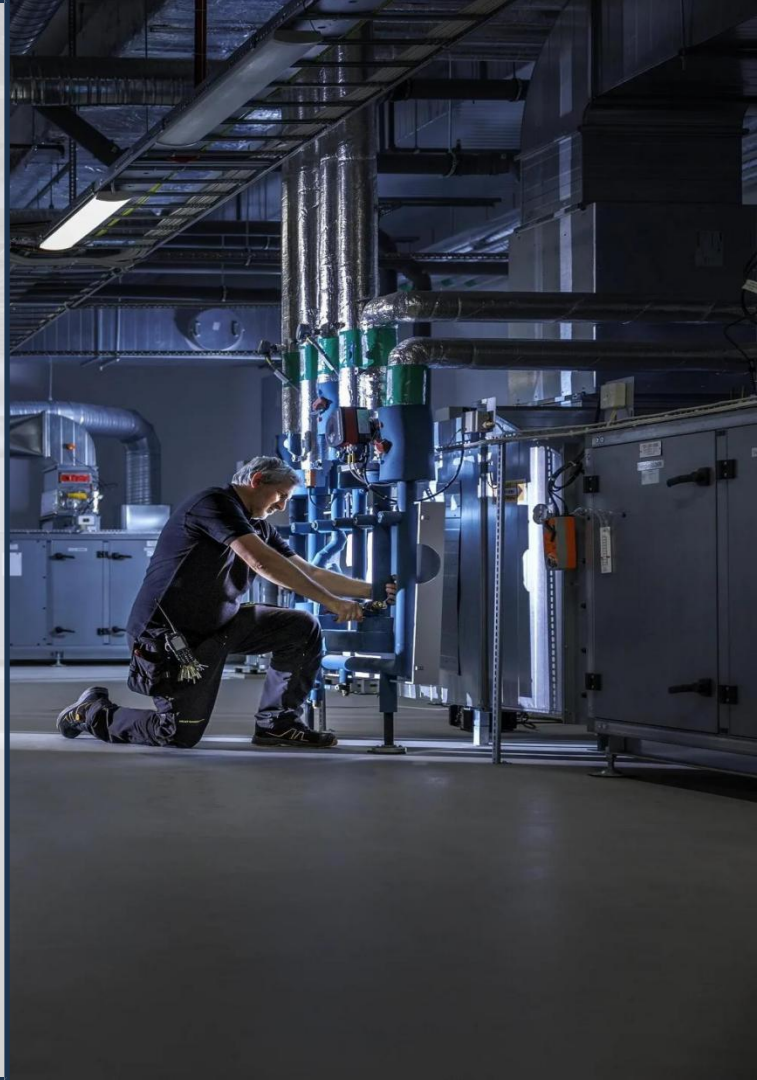
Situated in Cheng’an County, Handan City, Hebei Province—one of North China’s primary carbon and graphite manufacturing hubs.

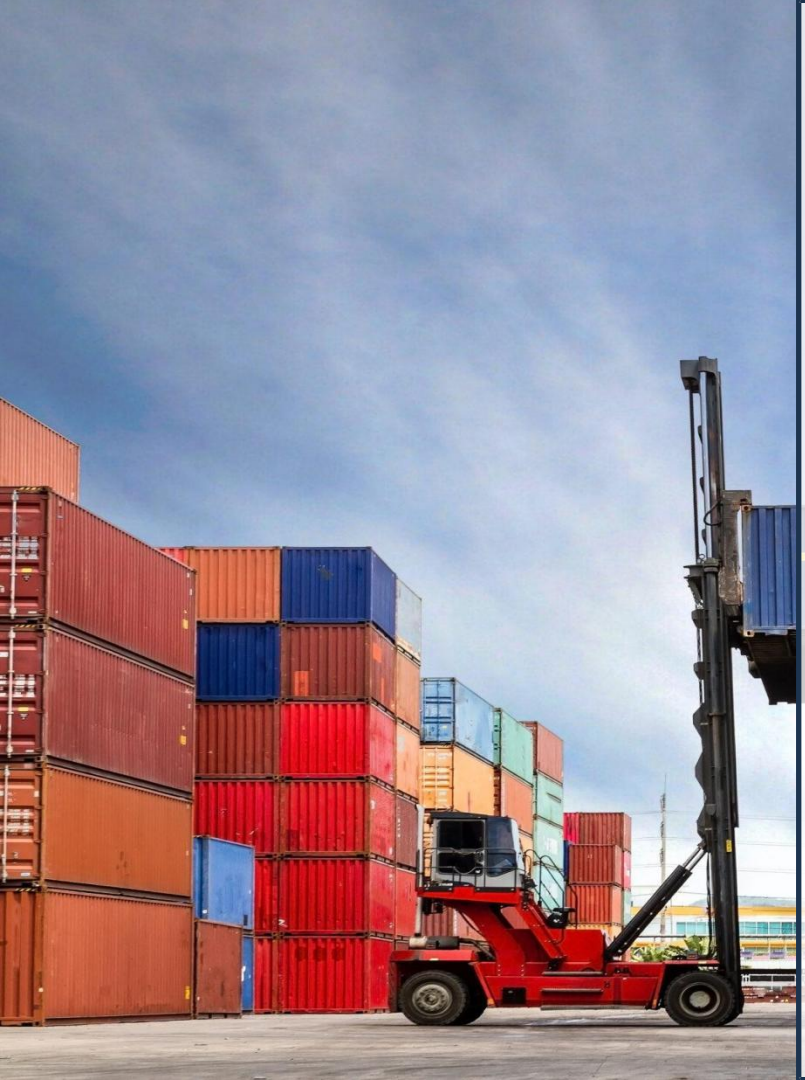
Proximity to major transport arteries: Beijing–Guangzhou Railway, National Road 107, and the Beijing–Hong Kong–Macau Expressway. This ensures seamless inbound logistics (coke, coal tar) and outbound shipments (electrodes, carbon products).

Site Area & Facilities

Total land coverage: 42,000 m², including administrative offices, storage yards, machining workshops, and testing laboratories.

Fixed assets exceed RMB 70 million, reflecting substantial investments in modern production lines, large-scale kilns, and advanced machining centers.





Production Capacity

Annual graphite-electrode output: 20,000 metric tons, covering UHP (Ultra-High Power), HP (High Power), RP (Regular Power) grades, and electrode nipples.

State-of-the-art facilities enable continuous processing: raw-material mixing → billet forming → baking → graphitization → machining → final quality inspection.

Dedicated area for auxiliary carbon products: graphite crucibles, blocks, rods, plates, special-shaped parts, and carbon electrodes

Workforce & Expertise

Over 170 employees, including 21 specialized technical staff (material scientists, process engineers, quality-control engineers).

Ongoing training programs in composite-material technology, kiln operations, and CNC machining to maintain high consistency and low electrode-consumption rates during smelting.

Quality & Certifications

ISO 9001 Quality Management System – All production processes—from raw-material procurement to final product dispatch—adhere to ISO 9001 standards, ensuring full traceability and continuous improvement.

SGS, CTI, RoHS Compliance – Selected products undergo third-party testing for electrical resistivity, density, flexural strength, and environmental-safety parameters (e.g., RoHS for heavy-metal content).

Environmental Measures – Kilns feature advanced waste-gas treatment systems to minimize particulate emissions; spent coke and calcined petroleum coke by-products are recycled whenever feasible.


Product
Portfolio

Graphite Electrodes

Key Specifications:
Diameters: 200 mm–1,400 mm
Lengths: 1,000 mm–2,400 mm
Material Properties:
Apparent density ≥ 1.64 g/cm³, resistivity ≤ 6.3 μΩ·m, flexural strength ≥ 10.5 MPa

Ultra-High Power (UHP): Suitable for modern Ultra High Power Electric Arc Furnaces (current density > 25 A/cm²). Features low resistivity (≤ 6.3 μΩ·m), high density (≥ 1.64 g/cm³), and excellent oxidation resistance.

High Power (HP): Engineered for High Power Arc Furnaces (current density 18–25 A/cm²). Exhibits balanced electrical conductivity and mechanical strength (e.g., flexural strength ≥ 10.5 MPa).

Regular Power (RP): Cost-effective solution for conventional steel-making furnaces (current density ≤ 18 A/cm²), with robust machining tolerances.

Electrode Nipples: Seamless nipples machined to OEM specifications, ensuring reliable electrical and mechanical connections during furnace operation.

Carbon Electrodes & Carburizers

Graphitized Carbon Electrodes: Tailored for resistance heating, metallurgical applications, and electric heating furnaces.

Carburizers: High-carbon (≥ 85 %) powdered products designed to increase carbon content in steel-making, featuring fine particle distribution and low sulfur/ash content.

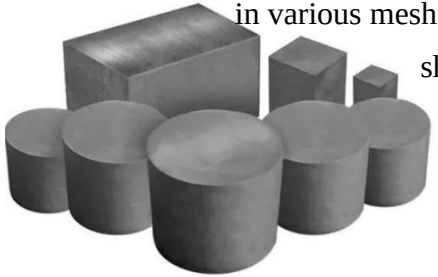
Graphite Products

Graphite Crucibles: High-purity crucibles (≥ 99 % C) for laboratory and industrial melting of non-ferrous metals; exhibit excellent thermal shock resistance and dimensional stability.

Graphite Blocks & Plates: Used as electrodes in EDM (Electrical Discharge Machining), as heat sinks in high-temperature applications, and as structural components in semiconductor manufacturing.

Graphite Rods & Bars: Standard and custom-shaped rods for spark-gap switches, EDM electrodes, and chemical-process conduits.

Graphite Scrap & Special-Shaped Parts: Recycled-grade scrap available in various mesh sizes; bespoke machining services to produce irregular shapes, grooves, or composite assemblies.



Factory Layout & Workflow

The production of graphite electrodes involves a series of precise and controlled steps to ensure high quality. Raw materials like calcined petroleum coke and needle coke are stored in silos, while binders such as coal tar pitch are kept in temperature-controlled tanks. Automated mixing systems blend these components (typically in an 88:12 coke-to-pitch ratio) using vacuum kneading for uniformity. The mixture is then extruded into green billets with tight dimensional tolerances. These billets undergo baking at 1,200 °C to carbonize the binders, followed by graphitization at up to 2,800 °C to enhance electrical conductivity through structural transformation. Final machining on CNC lathes ensures precise dimensions for electrode and nipple fittings, with thorough inspections for defects. Finished products are securely packaged with corrosion protection and shipped via container or bulk transport depending on destination.

Certifications & Compliance

ISO 9001 – Quality management system certified by an accredited third-party body, ensuring full process traceability and consistent product performance.

SGS & CTI – Independent test reports confirming electrical, thermal, and mechanical properties; clients can request batch-specific certificates of analysis.

RoHS Compliance – Select high-purity graphite products undergo testing for restricted heavy metals, ensuring suitability for electronics and semiconductor industries.

Our vision&Goals

Our Vision

To be a globally recognized leader in carbon-materials innovation—delivering the highest-performance graphite electrodes and carbon products to metallurgical, electronics, and emerging-tech sectors.

Our Goals

Technical Leadership: Ongoing investment in R&D focuses on advanced carbon materials like graphene-coated electrodes and nanostructured carbons to lower electrode consumption and energy use in steel production.

Global Expansion: Plans to enhance global reach by 2026 through satellite warehouses and dedicated support teams in North America, Europe, and Southeast Asia.

Sustainability & Circularity: Committed to reducing environmental impact by improving kiln energy efficiency, recycling waste heat, and implementing a closed-loop system to reclaim 90% of carbon scraps and spent coke for reuse by 2027.

Customer-Centric Excellence: Provides comprehensive support with on-site technical consultations, furnace-performance analysis, and custom electrode design to optimize efficiency and reduce downtime for clients.

Why choose RT Carbon?

Proven Track Record: Over 35 years of uninterrupted operation, with products sold domestically across 15 provinces and exported to Russia, Southeast Asia, the Middle East, the U.S.A., and South America.

Unmatched Production Capacity: Annual output of 20,000 tons of electrodes—paired with in-house machining capabilities—enables rapid turnaround for large-volume orders.

Technical Expertise: A team of 21 dedicated technical engineers drives process optimization projects—such as low-V vacuum kneading, precise graphitization cycles, and advanced nondestructive testing—to ensure minimal electrode consumption rates for end users.

Comprehensive Product Range: From UHP and HP graphite electrodes to custom-shaped carbon parts (crucibles, blocks, rods), RT Carbon provides a one-stop solution underpinned by strict quality control.

Global Service & Support: Multi-lingual sales and technical support—backed by third-party certifications (ISO 9001, SGS, CTI)—instill confidence that every order is backed by full accountability and performance guarantees.

Appendix: Key Data at a Glance

Company Name:	Hebei Ruitong Carbon Co., Ltd. (RT Carbon)
Founded:	July 1985
Headquarters:	Chenbiandong, Guochang, Cheng'an, Handan, Hebei 056799, China.
Registered Capital:	RMB 31,540,000
Total Land Area:	42,000 m²
Fixed Assets:	RMB 70 million+
Employees:	170+ (including 21 technical experts)
Annual Production Capacity:	20,000 metric tons of graphite electrodes
Product Categories:	UHP/HP/RP Graphite Electrodes & Nipples; Carbon Electrodes; Graphite Crucibles, Blocks, Rods, Plates, Scrap; Carburizers.
Key Certifications:	ISO 9001; Third-party SGS & CTI test reports; RoHS compliance (select products)
Core MarketsDomestic:	(15 provinces in China); Russia; Southeast Asia; Middle East; U.S.A.; South America
Quality Control:	Multi-stage inspection (raw material → in-process gauges → final ultrasonic & visual tests); batch-specific certificates of analysis.
R&D & Process Innovation:	Vacuum kneading, high-temperature graphitization (2,800 °C), CNC machining centers, kiln-energy-recovery systems.
Long-Term Goals:	Expand to satellite warehouses in North America & Europe by 2026; achieve a 90 % internal carbon scrap recycling rate by 2027; develop graphene-coated electrode lines.
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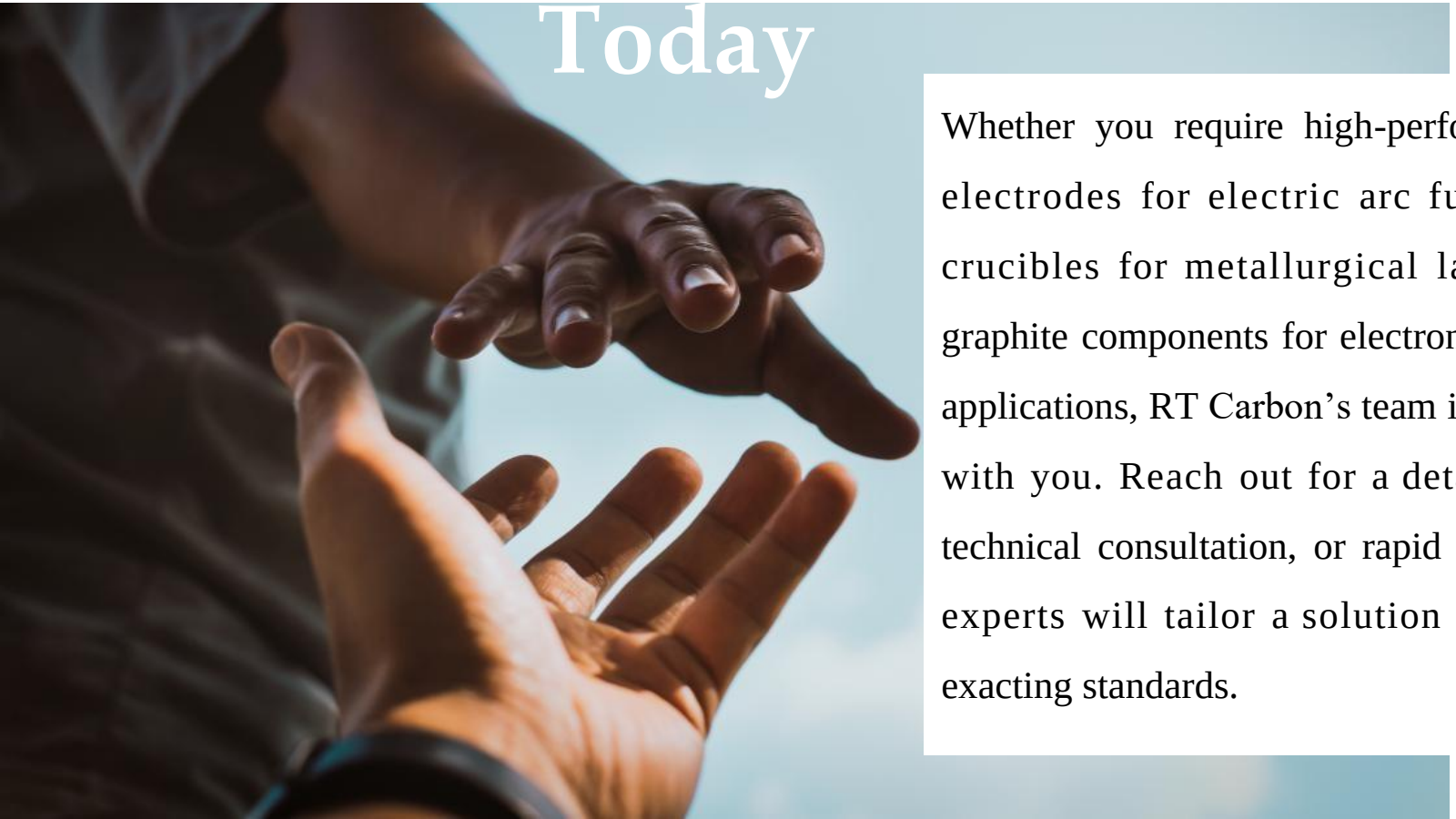
Contact RT Carbon Today



Whether you require high-performance graphite electrodes for electric arc furnaces, carbon crucibles for metallurgical labs, or bespoke graphite components for electronics and chemical applications, RT Carbon’s team is ready to partner with you. Reach out for a detailed quotation, technical consultation, or rapid prototyping—our experts will tailor a solution that meets your exacting standards.

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We look forward to collaborating with you—driving performance, reducing costs, and forging a more sustainable future in carbon- materials manufacturing.