



RESONAC

**WE
ARE
RESONAC
GRAPHITE.**



WE ARE RESONAC GRAPHITE.

"At Resonac Graphite Business Unit we believe, above all, in the value of people, in their talent and in their ability to improve the world. As a world leader in the production of graphite electrodes, used in an infinite recycling process, that of steel, we know that sustainability today is a way of life and a way of understanding the world. The decarbonization of industry and its incorporation into every aspect of our company, is a challenge that demands solutions that our business unit is getting closer to every day thanks to the work we have carried out in recent years.

Our priority is to work together with the rest of our stakeholders towards a better future, and we know that the key lies in our human capital. That's why at RGBU we take care of our employees' working conditions to become the place where we would want our beloved ones to work. The equality, safety and welfare of our staff is the maxim that governs each of our present and future actions. On behalf of all of them, I would like to thank you once again for the trust you renew in us every day".



M. Takeda

Mako Takeda,
CEO of Resonac Graphite



PRODUCTION PLANTS RESONAC GRAPHITE WORLD WIDE.



AMERICA



EMEA



ASIA

Our graphite electrodes are produced at six sites and delivered to our customers worldwide. A strong regional concept ensures short lead times, reliable supply chains and an ability to cater closely to our customers' needs.

THE POWER OF TECHNOLOGY.



One of our mottos is “We sell value – not volume”. In other words, there is more to our business than just selling a certain volume of graphite electrodes to our customers. We truly want to understand what value means to our customers. Whether an especially sustainable product, a very short lead time or a sophisticated technical service – we want to know. This understanding can ignite great innovation, such as the birth of our Omega electrode. Omega is a ladle furnace electrode manufactured in Europe using 100% renewable electricity. The great success of this innovation confirms our success in meeting one of our customers’ main needs.

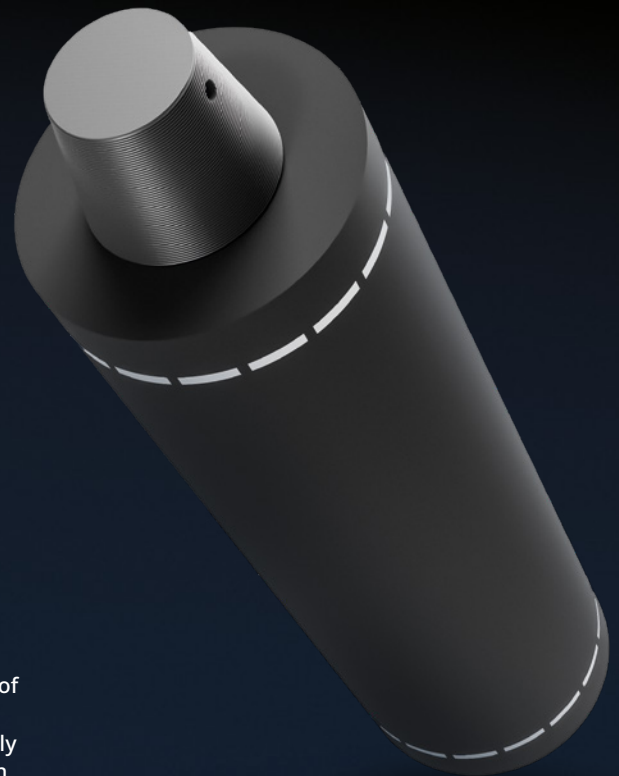
GRAPHITE ELECTRODES.

Graphite electrodes are used mainly in the production/recycling of steel, where steel scrap is melted in a large furnace by the heat from an electric arc, hence ‘electric arc furnaces’. Approximately 1/3 of global steel is produced in this way, making it the largest recycling process in the world. In contrast to steel production using iron ore, electric arc furnaces avoid about 80% of direct CO₂ emissions per ton of steel.

In the steel mill, the crucible is loaded with steel scrap. One strand (direct current furnace) or three strands (alternating current furnace) consisting of several graphite electrodes screwed on top of one another are introduced and the arc ignited. The enormous heat generated (around 3500 °C) quickly melts the scrap in the furnace, typically within 45 - 90 minutes. The molten steel is then poured off for further processing in a procedure known as tapping.

So why must the electrodes be made of graphite? If they were made of metal, as in almost all electrical devices, they would melt just like the scrap. Hence the need for a material that can conduct the electric current into the scrap without itself melting, even at the extreme temperatures in the arc. Our graphite meets precisely these conditions.

But despite its exceptional properties and durability, the graphite electrode consumes itself in the melting process, mainly through oxidation. Therefore, the shortening strand must be regularly supplemented by screwing on a new electrode. Our customers appreciate the low consumption rates, high quality, and reliability of our products.



STANDARD DIAMETER:
350 – 800 MM / 14 – 32 INCHES

STANDARD LENGTH:
1500 – 3600 MM / 60 – 142 INCHES

TYPICAL WEIGHT:
0,3 – 3,2 TONS

TYPICAL CONSUMPTION RATE:
1 – 2 KG GRAPHITE PER TON OF LIQUID STEEL

ESG FOR A BETTER WORLD.

We enable sustainable advancement of society by helping to recycle steel in an efficient and environmentally friendly way by globally providing world class electrodes and supporting services.

We are committed to operating our business in a sustainable and responsible manner, and we believe that Environmental, Social and Governance (ESG) considerations are critical to our long-term success and to a better world.

WE ARE



ENVIRONMENTAL



SOCIAL



GOVERNANCE

STEEL INDUSTRY WITH RESONAC.



We are proud to be a key part of the world's largest recycling process: the recycling of scrap steel to create new steel.

Our customers operate Electric Arc Furnaces, where graphite electrodes are the core element of the melting process. Compared to the still dominating method, the creation of steel from iron ore in a Blast Furnace, our products help to save 80% of CO₂ emissions.



RESONAC

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