

With the pride of carbon

To realize carbon neutrality, our products are widely contributing to various industries.

Since its founding in 1934, SEC Carbon has consistently led the way in developing and producing top-quality graphite products. Today, as a vital contributor to carbon neutrality efforts, the company offers a range of innovative products that play a pivotal role in reducing CO₂ emissions and advancing sustainability.

This includes graphite electrodes for electric furnaces, offering substantial reductions in emissions compared to traditional blast furnaces, and SK-B cathode blocks crucial for aluminum production, helping to reduce the weight of automobiles. The company also specializes in Carbon & Graphite specialty products and Fine Powder, essential components and battery materials for electric vehicles.



Carbon & Graphite Specialties

These Carbon & Graphite specialty products have applications across various industrial sectors, including chemical, electrochemical, machinery, and metallurgy, and can be used independently or as composite materials with resins and metals. SEC Carbon excels in precision machining, utilizing large and long-sized graphitized blocks manufactured through extrusion forming. These products possess outstanding heat and chemical resistance plus electrical conductivity, making them ideal for use in molten salt electrolysis electrodes. The resultant production of lightweight and robust metals like magnesium and titanium, used in portable devices, automobiles, and aircraft, contribute to weight reduction and fuel efficiency. Continuous



Large and long-sized graphite block



refinement of product grades and exploration of new product development taps into new markets and attracts new customers.

The use of Fine Powder, an exceptionally pure and crystalline graphite powder, includes sliding materials, batteries, paints, and electrical components. These are manufactured using state-of-the-art production equipment and advanced graphitization and processing technology, ensuring unmatched stability in product quality. In addition to a diverse lineup of natural graphite and carbon powder is tailored to customer ap-

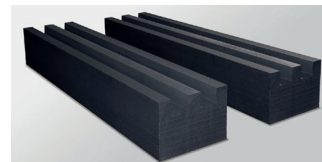


Fine Powder

lications, available in a broad range of series and sizes from 1 to 100 micrometers. The increasing demand, particularly in the expanding EV market, has prompted a continuous expansion of production capacity.

The importance of aluminum in reducing automotive weight and achieving global energy savings and carbon neutrality cannot be

overstated. The demand for cathode blocks used in aluminum smelting is on the rise, and SEC Carbon stands



as the world's pioneer in the development of graphitized cathode blocks for highly efficient aluminum production. The company's consistent quality and production for over 50 years has earned the trust of aluminum smelters worldwide. The Kyoto Plant, the world's largest graphitized cathode production facility, employs a highly efficient swing production system with



Graphite Electrodes

graphite electrodes for steelmaking, ensuring price competitiveness.

The global shift towards achieving carbon neutrality has led to a growing preference for electric furnaces, which can reduce CO₂ emissions to one-fourth compared to blast furnaces, with demand for associated graphite electrodes expected to soar. SEC Carbon's legacy dates back to 1962 when it successfully commercialized a 24-inch large-diameter electrode, then the world's largest, and the company has since established unwavering trust and gained recognition for its development capabilities and quality at home and abroad. Through its premium graphite electrode, the company remains committed to making substantial contributions to energy cost reduction and productivity improvement in electric furnaces.

Furthermore, as part of its dedication to achieving carbon neutrality, SEC Carbon is actively working on capturing and repurposing CO₂ as a valuable resource. The company plans to commercialize this groundbreaking technology and extend its use globally. In line with the call for "carbon neutrality and the realization of a decarbonized society by 2050," there is a growing demand for "CO₂ recycling" alongside CO₂ emission reduction efforts. SEC Carbon's pioneering work involves producing carbon particles from carbon dioxide using molten salt

electrolysis technology, subsequently transforming them into graphite particles through heat treatment. An innovative approach to converting carbon dioxide into a valuable resource, and contributing to a more sustainable future.

