Process technology for the phosphoric acid industry – made by SGL Carbon

We cover the entire supply chain, from the manufacturing of graphite materials to complex systems including a comprehensive range of equipment and services.

Process solutions
- Concentration of $\text{H}_3\text{PO}_4$
- Purification of $\text{H}_3\text{PO}_4$
- Dilution of $\text{H}_2\text{SO}_4$

Equipments

### Graphite heat exchangers
- **DIABON® shell & tube heat exchanger**
- **DIABON block heat exchanger** (cylindrical, cubical, mono block)
- **DIABON plate heat exchanger**

### Graphite and PTFE lined columns, reactors, vessels
- **DIABON graphite columns**
- **POLYFLURON® PTFE lined columns**

### Graphite, carbon and exotic metal pumps
- **DIABON/DURABON® or exotic metals** (titanium, zirconium, nickel alloys) centrifugal and axial pumps
- standard designs acc. ISO 2858 with back pull-out available

Parts and assemblies

- **PTFE lined piping, expansion bellows and parts**
- **POLYFLURON piping system, linings and lining services**
- **POLYFLURON expansion bellows**

- **Column internals** (feed pipes, grids, liquid distributors, trays, packings etc.)
- **DIABON graphite and PTFE internals**
- **SIGRABOND® carbon fiber based high-performance internals**
- **DIABON rupture disks**

Services

Services by SGL Carbon – more than just repairs. We provide comprehensive services throughout the entire lifecycle
- **Start-up Services** (commissioning, installation, trainings, etc.)
- **Operation Services** (OEM spare parts, maintenance and repairs, emergency procedures, inspection, etc.)
- **Upgrade Services** (debottlenecking, equipment harmonization, spare parts concepts, etc.)
- **End of use Services** (conservation, revamping, re-use, end of life, etc.)
Did you know ...

SGL Carbon is the global market leader\(^1\) in graphite based process technology
We’ve been a trusted partner of the phosphoric acid industry for more than 35 years. Solutions like CARBOGUARD\(^\circ\) carbon fiber protection have been developed specifically for the industries requirements.

SGL Carbon provides graphite tubes with highest heat conductivities on the market at up to 130 W/mK (longitudinal) and 70 W/mK (radial)
DIABON tubes for shell & tube heat exchanger allow much more compact heat exchanger and can reduce the tendency of fouling significantly, resulting in longer lifetimes and up to four times less cleaning cycles. With our fully-graphitized tubes and the optional CARBOGUARD protection tube breakage (e.g., during water jet cleaning) can be reduced up to 20x.

SGL Carbon manufactured the largest graphite columns in the world
A diameter of 3 m and trouble free operation since more than 10 years is our proof for the high quality promise.

SQL Carbon provides process solutions including performance warranties
By combining our high performance equipment for corrosive applications, state-of-the-art (simulation) software and a long time experience in process design we can offer you full systems with essential benefits like:
• highest efficiency by perfectly aligned components
• in many cases including performance warranties
• at minimum TCO (Total Cost of Ownership)

SGL Carbon introduces innovative carbon fiber based engineered solutions
We are the first supplier worldwide applying modern carbon fiber based materials (SIGRABOND) in a broad range for process equipment and parts. Your benefits are state-of-the-art products setting a new benchmark in performance and handling at economic prices.

\(^1\) Acc. Global Graphite Heat Exchanger Report 2015, QY Research Center