

SGS Bateman Modular Plants

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Innovative Technological Solutions

SGS Bateman modular plants offer innovative technological solutions as well as full process and commodity knowledge to the global mining industry.

SGS Bateman manages the complete project lifecycle from concept to commissioning, optimizing the flowsheet of a project through state-of-the-art process engineering and successfully delivering completed projects using leading-edge project management systems. Comprehensive services for new process plants and brownfield upgrades, cover a wide range of commodities and are tailored to both large and small projects. With some 500 modular plants installed since the 1960s, SGS Bateman's modular plants offer competitive mineral processing packages for lower tonnages, while reducing risk by pre-commissioning before site erection.

SGS Bateman's engineering and EPCM skills and modular solutions have been proven on some of the most exacting mineral resource projects, in the most difficult of terrains.

Modular plants are self contained or are integrated into conventional plants. They are used for prospecting, exploration, research and testing, mining and mineral processing on land or sea. The process design is robust and makes use of the best available components from reputable suppliers that support their products worldwide. Modular plants are easy to erect on site since they are trial erected and pre-commissioned at the factory, where they are marked, stripped and packed into containers, prior to dispatch to site. Modular plants are used in the beneficiation and recovery of a wide range of commodities, including lithium, diamonds, coal, graphite, copper, magnesite, andalusite, chromite, platinum and gold.



Benefits of Modular Plants

SGS Bateman offers a wide range of services:

- Pre-assembly and testing of all structures, equipment, piping and electrics
 - Eliminates on-site erection difficulties.
 - Reduces overall construction time.
 - Ensures reliable operation on commissioning.
- Ideal for remote sites with minimal infrastructure
 - All services provided in self-contained modules.
 - Containerised modules or modular gable coverings provide security and protection against the elements.
 - Low skill personnel required on site for re-assembly.
- Easy to transport, re-erect, operate and maintain
 - Partially assembled and transported in containers.
 - Designed to allow ease of maintenance.
 - Ergonomic design makes equipment readily accessible.
- Minimal operator attention required, which is key where there are skills shortages.
- Wear and corrosion-resistant construction materials.
- Low maintenance components.
- Modular structures ensure that vibrations are contained.
- Prolonged service life and reliable operation
 - Fit-for-purpose design.
 - Hard wearing, corrosion-resistant, robust and proven components.
 - Equipment sourced from world-leading brands, which provide global support services.
- Low impact on the environment
 - Modules built on boxed steel skid frames, which minimise on-site civil structures.
 - Minimal site rehabilitation required post mining operations.



Design and Project Team

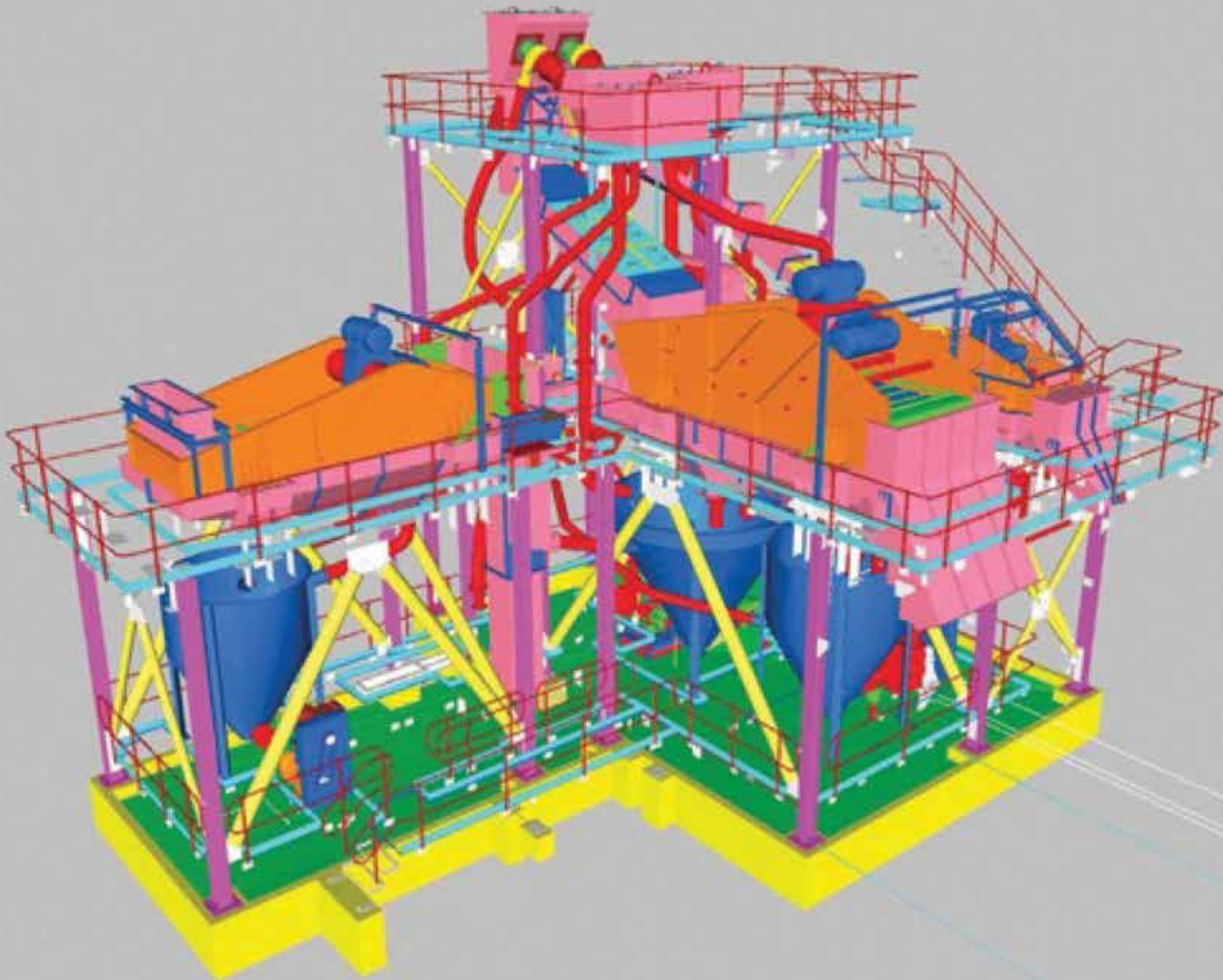
SGS Bateman has a comprehensive, multi-disciplinary team focused on the design, supply and support of modular plants, consisting of project managers, process engineers, mechanical engineers, draughtsmen, procurement and spares personnel, offering extensive collective experience in modular plants globally.

The SGS Bateman modular plant team works closely with the client to design and build a complete plant to process different commodities, balancing Capital Expenditure (CAPEX), Operational Expenditure (OPEX), process efficiency and site considerations.

Our modular plant team can advise the client on different mining and processing techniques, as well as offer the capability to recommend the best mineral processing method to adopt.

STANDARD COMMODITY PLANT DESIGNS

- Copper: 50 to 200 tph. Designs cover Feed Preparation (pre-concentration – optional), Leaching, Solid / Liquid Separation, Solvent Extraction (SX) and Electrowinning (EW).
- Gold: 1 to 50 tph. Plants consist of Comminution sections and combinations of the following processes:
 - Gravity Concentration.
 - Flotation.
 - Leaching / Adsorption (Carbon / Res-in-in-pulp).
 - Elution.
 - Electrowinning.
- Coal: 100 to 500 tph. Process plants consists of Crushers, Dense Media Separation (DMS) Fines Treatment and Water Recovery.
- Diamonds: 1 to 300 tph. Processes include Feed Preparation (Crushing, Scrubbing and Screening), DMS and Grease or X-Ray Sorting.



MODULAR PLANT DESIGN

The modular plant design ensures:

- Competitive, efficient and cost effective processing.
- Configuration and design to specific process and geographic requirements.
- Supply as stand-alone facilities or for incorporation into more permanent processing circuits.
- Compact footprint requiring minimal civil construction.
- SGS Bateman's Quality Management System is aligned to ISO 9001:2015.

SUPPORT SERVICES

SGS Bateman offers a comprehensive range of support services:

- Spares and consumables.
- Density tracers: standard and inexpensive technique to determine whether DMS cyclones are functioning optimally.
- Consulting and training: consulting services on all aspects of processing; supervision of erection and commissioning; and training of operating personnel.

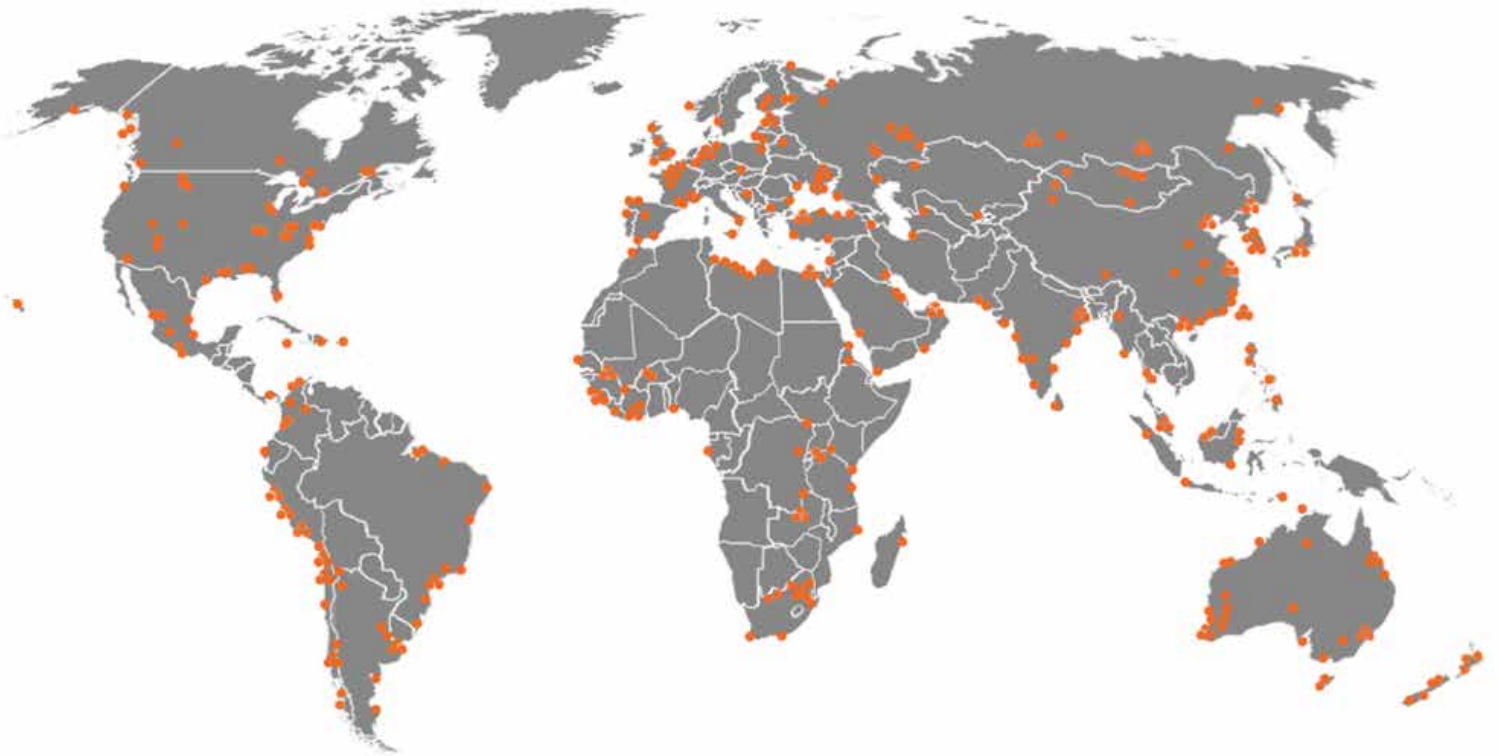
MODULAR PLANT TRACK RECORD

About 500 complete plants or sections of plants have been installed in about 30 countries worldwide since 1967.



Global Reach

SGS Bateman is part of SGS's unparalleled global network of over 150 commercial, on-site and mobile laboratories, 11 metallurgical facilities, 5 mineralogy facilities. Of these sites, 4 labs are fully integrated GEMM (geochemistry, environmental, metallurgy, mineralogy) labs (located in Canada, Chile and South Africa) and to provide integrated geochemistry metallurgy services (Peru and Russia). SGS Bateman has another process engineering office located in the United States.



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and more interconnected world

TAKE YOUR NATURAL RESOURCES OPERATIONS TO THE NEXT LEVEL.

GET IN TOUCH TODAY.

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