MODULAR PLANTS CAPABILITY
DRA Global produces a wide range of standard process plant modules, which can be combined and integrated in various ways to best match the particular process requirements of individual projects and clients.

Standard modular plants are designed to process coal, iron ore, diamonds, chrome, manganese and mineral sands, as well as metalliferous ores (both precious and base metals) that are disposed to pre-concentration and the removal of gangue using dense medium separation (DMS) and gravity separation technologies.

These plants are efficient and easy to operate and maintain – the result of three decades experience in successfully providing small and medium-sized operations with mineral processing solutions.

Where standard modules cannot meet the particular requirements of a given project, DRA Global also undertakes the engineering and design of tailored modules.
ADVANTAGES OF MODULAR PLANTS

Modular plants offer numerous advantages over conventionally tailored plant designs. Due to pre-engineering, the manufacturing lead time is much shorter. Workshop pre-assembly results in simpler and faster erection on site, which leads to shorter overall project duration, lower site costs and expedited returns. These plants can be utilised to gain early access at low capital cost, followed by phased expansion at a later date, once a steady cash flow has been established. The use of modular plants is also ideal in cases where a small deposit with a relatively short life of mine cannot support a large capital expenditure.

INNOVATIVE DESIGN

DRA Global’s selection of standard modules covers a wide range of capacities and unit processes, from crushing and screening through dense medium and spirals separation, to filtering and thickening modules, along with materials handling and storage. These allow maximum flexibility in configuring and integrating the best solution for each project. The modules are designed to suit plant operations of various sizes, from small to medium-sized projects, and allow for the addition of more streams to expand capacity, minimising the overall footprint and conveyor lengths, in order to keep plant costs to a minimum. By utilising and selecting proven equipment and suppliers DRA Global ensures best performance and backup of plants.

Fit for purpose specifications and standards have been developed and adopted in order to drive plant costs down, while still ensuring that the high operational and safety standards, for which DRA Global is known, are maintained throughout its modular plants.

QUICK SUPPLY AND ERECTION

A library of pre-engineered standard module designs and plant layouts ensures that DRA Global can accelerate the manufacturing and supply of its modular plants. This, combined with fast site construction and erection, provides the shortest overall programme to commissioning and production. The organisation is supported by partnerships with key equipment vendors for components such as screens, pumps, magnetic separators, crushers, cyclones, thickeners and water tanks. DRA Global is able to rapidly turn around the selection, integration and costing of plant modules to provide fast, accurate and reliable costings to clients.

COST EFFECTIVE

Engineered and designed to provide a low capital cost alternative to conventional tailored plants, modular plants are also designed to run at low operating cost levels, further enhancing the value of the plant. Modular plants also have a higher residual value owing to the freedom of being able to quickly and easily relocate the plant to another site. The extent and duration of P&G requirements on site, during the construction of a modular plant, are significantly reduced with resultant cost savings.
COMMODITY PLANT DESIGNS

COAL

DRA Global provides a wide range of modules for coal processing, from 100 tph to 600 tph capacity, including primary and secondary crushing, screening, dense medium separation, spirals, centrifuges, belt filters, feed and discard bins, thickeners, floc plants, conveyors and stackers. These modules can be combined in various ways to achieve the best configuration for washing and separating all types of coal.

Modular coal plants can be implemented for projects producing as little as 300,000 tonnes of coal per annum in a simple small Dense Media Separation (DMS) plant, to over 8 million tonnes of coal per annum using multiple streams of larger sized modules. Water recovery is a critical driver in the design of DRA Global’s modular plants, along with process efficiency and low power consumption.

IRON ORE

There are many iron ore deposits that require the ore to be upgraded in order to produce a saleable product. Dense medium separation and spirals technologies are well suited to this application and are becoming more commonplace because of the advantages offered by modular plants.

These ores often require scrubbing to remove clay before upgrading. DRA Global provides modular solutions to make the treatment of these types of ore viable. Quick deployment of modular DMS plants provides early access to production and cashflow to fund further development and expansion, while ensuring that capital and operating costs are kept to a minimum. For these reasons, modular plants are ideally suited to early access projects in remote locations.

STANDARD OR TAILORED SOLUTIONS
DIAMONDS
DRA Global has been designing and building modular diamond plants for over two decades, which have been supplied to countries all over the world. These plants have varied in capacity from 3 tph exploration plants and 15 tph bulk sample plants, to 240 tph production plants, using single and twin-streamed DMS modules. These plants have included modular recovery sections as well as scrubbers, multi-stage crushing circuits, thickeners and flocculation plants.

Many clients have placed repeat orders with the organisation for additional plants on subsequent projects owing to their performance, efficiency, reliability, ease of operation, maintenance, low cost and fast delivery. DRA Global is known as a preferred supplier of modular plants, throughout the industry.

BASE METALS
Pre-concentration of metalliferous ore through the use of dense medium separation technology provides benefits such as upgrading of mill feed, reduction of ore cut-off grades, extension of life of mine, reduction in milling power consumption and reduction of reagents consumption, leading to increased higher production levels at lower overall unit costs. The suitability of an ore to this method of upgrade is dependent on the results of the densimetric testwork.

DRA Global has engineered and built modular DMS plants for a number of copper and zinc mines that have benefited from this approach to project development. As a start-up strategy, DMS plants can be used to upgrade ores to grades wherein the concentrate is a saleable product in its own right.
TRACK RECORD

DRA Global has built numerous modular plants dating back as far as the 1980s, mostly in the diamond and coal sectors, but has notably recently also built modular pre-concentration plants for copper, nickel and chrome. The organisation’s impressive track record in building large processing plants and projects is recognised throughout the industry.

STANDARDISED MODULES

DRA Global is a world leader in providing mineral and related infrastructure solutions to the global mining industry. The organisation provides tailored solutions to the industry and now offers standardised modular plants in addition to custom-designed plants. Providing both pre-engineered standard modules and custom-designed modular plants, the organisation is able to meet all client plant requirements. This is further supported by DRA Global’s growing capability in designing and building the wider infrastructure related to mining projects.
# PROJECT EXPERIENCE

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ABOUT
DRA Global is a diversified global engineering, project delivery and operations management group, with an impressive track record spanning over three decades. Known for its collaborative approach and extensive experience in project origination and delivery, as well as turnkey operations and maintenance services, DRA Global delivers optimal solutions that are tailored to meet clients’ needs. With expertise in the areas of project development, mining, minerals and metals processing, plant optimisation, operations & maintenance and related water, energy, and infrastructure requirements, DRA Global delivers truly comprehensive solutions to the resources sector. DRA Global employs over 4000 people and offers flexible engineering, project delivery and operations & maintenance management services through offices worldwide.

HEALTH, SAFETY & ENVIRONMENT
The health, safety and well-being of all stakeholders is central to DRA Global. At the heart of its safety culture is People-Based-Safety. This ethos highlights the safety of people and the communities in which DRA Global operates as a priority in every action. DRA Global continuously find new ways to improve on past results. In an effort to develop new ideas and ways of thinking, to share experiences and findings, DRA Global has developed a safety, health and environmental (SHE) management system that, while custom-made for DRA Global’s operations, is aligned with the international standards of OHSAS 18001.

RISK MANAGEMENT
DRA Global’s risk management processes are aligned with ISO31000 requirements and provide the flexibility to adopt risk methodologies of clients in an effort to meet all stakeholder requirements. The organisation’s risk management approach employs several techniques to ensure design outcomes meet safety, health and environmental requirements as well as operation and production objectives. These comprehensive procedures ensure the optimum delivery of a sound design solution including the suite of HAZOP processes (Hazard and Operability Study), SWOT (Strength, Weakness, Opportunity and Threats Analysis) and FMEA (Failure Mode and Effects Analysis).

CAPABILITIES

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