

Turnkey Modular

ISSF Member
Manufacturer
Field

Location
Environment
Grade and surface

Competing materials

Columbus Stainless
Turnkey Modular
Architecture, Building & Construction;
Electrical equipment & machinery
Johannesburg, South Africa
industrial
3CR12 HRA and No.1 finish for the structure;
304 balustrading
Mild steel, Brick and mortar

Advantage points of using stainless steel

Stainless steel gives the product superior corrosion resistance and instils a level of confidence around longevity. Over and above the corrosion issues the superior strength characteristics of stainless steel allows for the design of lighter weight equivalent structures. Complete stainless steel structures also offer superior lightning immunity and an electrical equity potential environment.

Product description

At the core of Turnkey Modular's business is the packaging of an array of technologies across multiple sectors and markets. The overarching requirements in each application are self-contained structures that are bespoke designed around the particular needs of the solution they house. These diverse and complicated solutions are deployed to the end user 100% commissioned and ready for operation.



Turnkey Modular. Picture courtesy of Turnkey Modular.



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To make this possible, Turnkey Modular have developed a fabrication technique that exploits the infinite flexibility and exceptional accuracy of building components that are laser cut and CNC bent from sheet metal. This technique has completely displaced the requirement for any structural steel in any of their structures. The structures rely on the inherent strength within individual components to form an exceptionally strong exoskeleton structure. This has made the product extremely scalable without the need for skilled artisans. The intelligence now resides within each component – making the fabrication process a simple assembly process. Reliability, accuracy and repeatability in this method are unprecedented when compared to traditional large structure fabrication. 3D design and finite element analysis have allowed for optimal structural elements originated from flat sheet metal. The technique has allowed for the building fully compliant blast rated structures in the oil and gas field with surprisingly reduced amounts of steel reinforcing. The technique also allows for the housing of a wide range of technologies that can be quickly and reliably deployed even in the most remote and hostile environments. Currently Turnkey Modular's solutions service clients in the oil and gas and mining industries particularly for large electrical solutions. Single transportable unit structures can weigh up to hundred tons and exceed 10 m in width and 30 m in length. The application of this bill technique is in its infancy and could certainly find its way across a vast array of sectors.