Beaver Gulf is a leader in providing techno-economical solutions to government, semi-government and major private establishments for multi-million dollar projects. Beaver Gulf is a turnkey contractor with full-fledged in-house civil construction, structural steel issues, aluminium & glazing and a precast concrete product division with its headquarters in Dubai, UAE. Over the years, Beaver Gulf has maintained and ensured maximum possible transparency and quality criteria coupled with customer satisfaction. This rigidly observed approach has made Beaver one of the leading multi-million turnover business groups in the region.

The Beaver Gulf precast concrete division is one of the largest precast production facilities in the world. Formerly known as Mammut Technocrete, it was established in 2005. Nowadays, Beaver Gulf offers full precast/prestressed systems for workforce accommodations, villa complexes, sub-stations (power stations) and other construction projects.

The facility

The facility has a production capacity exceeding 2.5 million square metres of precast panels per year and is located at National Industries Park Jebel Ali, Dubai.

It boasts state-of-the-art machinery including cutting & bending equipment, a mesh making machine, a batching plant, supplementary machinery, small tools, lifting & transporting platforms, cranes, shuttering robots, computerized mould plotters, welding machines, concrete distributors and curing chambers.

Precast concrete products can be arranged in structures or systems to form unlimited arrays of sizes and configurations and for numerous architectural or decorative purposes.
The product range offered is as follows:

- Precast concrete frame buildings
- Prestressed hollowcore slabs
- Prestressed beams & band beams
- Façade elements/architectural precast
- Concrete prestressed beams and non-load-bearing cladding panels
- Precast concrete boundary walls
- Precast concrete staircases and landings
- Precast concrete load-bearing walls
- Precast concrete load-bearing insulated walls

In 2017, the factory was thoroughly reorganized, a challenge for which Beaver intended to work together with top expertise engineers. To carry out this prestigious task in terms of quality and speed, Beaver Precast Gulf requested the assistance of MCT Italy, a precast consultant and international expert, to support this endeavour with the help of its local partner, Philip Tabone International.

MCT Italy was thus entrusted with upgrading the major Beaver precast facility after detailed studies of its equipment, efficiency, reliability, after-sales service support and experience throughout the Emirates region.
The factory is composed of five production halls and two independently operated batching plants featuring fully automatic concrete distribution systems comprising high-speed flying buckets and automatic casting machines.

The first batching plant equipped with two 2250/1500 planetary mixers and one 1500/1000 mixer allows for the production of both grey and coloured concretes for concrete panels and walls.

The second plant equipped with two 3000/2000 planetary mixers delivers concrete to 17 beds for prestressed hollowcore slabs and moulds for casting structural precast elements, beams, staircases and boundary walls.

The double-mixer plant has been designed to ensure a concrete production of 100 cubic metres per hour during peak times; an automatic ice dosing system permitting the cast of concrete even during hottest hours. Rapid, reliable and fast delivery is carried out by means of the latest version of Marcantonini Concrete Technology flying buckets capable of an operational passageway of up to 240 metres per minute.

The overall plant equipment supplied to Beaver Gulf Precast includes one of the latest versions of Compumat®, MCT Italy’s software developed entirely in-house, a tool that is taking precast production to a new level. This new MCT system for concrete production and casting process management keeps developing and expanding along with the requirements of quality control and verification, features that are nowadays, more than ever, becoming more strictly controlled by authorities worldwide.

The new software control system, together with other technologies developed by MCT, enables customers to achieve the most efficient precast production possible, minimizing operational errors and waste and reducing costs.

Several new features have been implemented in this software, with the aim of considerably reducing manual labour on the
part of operators while at the same time achieving outstanding results. Proactive support from MCT’s headquarters in almost real time is granted to be able to prevent any possible fault and to monitor the status of all installations. A plethora of data can be easily extracted from the software to feed any ERP, BI suite or any other data analysis system.

The concrete transport system constitutes a central part of the Beaver precast production facility. All modifications carried out for factory upgrading purposes have been specifically approved, guaranteeing a safe industrial environmental based on the MCT risk assessment chart as described below.

MCT Italy’s risk assessment chart includes suggestions and actions for eliminating possibly wide ranging risks. The methods for eliminating such risks vary. At the lowest risk level, simply informing and training workers might be enough; at the highest level, MCT Italy has installed automatic gates to prevent access to danger zones (flying bucket, washing, and maintenance areas) with the power switched off automatically when a gate is open.

Playing a major role in the Middle East

MCT Italy is well established and known as one of the major players for the supply of customized precast mixing plant & concrete distribution systems all across the Middle East.

“I think the Dubai market still has a long way to go. Yes, it has matured, and I don’t expect the market to grow the same way it has grown before — 100% or 200%,” Mr. Falchetti added.

“The demand for housing cannot be met using traditional building systems and can only be addressed by employing precast building systems produced in modern and computerized precast plants. This will minimize labour requirements and project duration while increasing product quality,” he continued.

Mr. Rajesh Kumar Krishna, Chairman and CEO of Beaver Gulf Group, affirmed: “Our driving force, undoubtedly, has been the trust our clients have placed in us and the versatile team of committed and qualified professionals who stood by us as we shaped the city skyline. We are proud of our new precast facility and supplier MCT Italy, which will help us to further develop our success in all segments of project management, construction and precast concrete products across the Emirates. We have faced many challenges in our journey to excellence and MCT Italy rendered to us the competence to address and overcome these challenges thanks to their robust techniques, skilled support and by encouraging our team members through innovation and knowledge.”

“Continuous product development is our main target. This is what we strongly believe in! The role of software and automation is continually on the rise, hence we constantly optimize concrete production processes, and the analysis of relevant data has become a matter of intuition with our new Compumat®. Remote control facilitates the development of extremely easy updates, checks, or even the management of the entire production process,” Gabriele Falchetti said.

Further Information

Mr. Gian Piero Gagliardi, owner of Nordimpianti; Mr. Sakthivel Prabakar, Beaver Precast Gulf Maintenance Manager; Mr. Karthikeyan Nair, Beaver Precast Gulf Deputy General Manager; Mr. Gabriele Falchetti MCT Italy, MCT Italy Middle East Sales Director; Mr. Paolo Sterzi, Bianchi Casseforme Middle East Sales Director

“Based on our extensive experience in the sector, we are able to offer our clients customized turnkey services ranging from the design of plant layouts to plant operation and erection on site. The whole process involves consultation, project planning, production, operation, installation, and after-sales services,” Mr. Gabriele Falchetti, Middle East Sales Director for MCT Italy, said.