

01/10/2019

# Complete glass line from Sidel helps Qatar's Rayyan Water reap opportunities in the premium segment



To address the steadily growing demand for premium bottled water on the Arabian Peninsula, Rayyan Water, the biggest water producer in Qatar, opted for a new complete line from Sidel. From bottle qualification to line requirements onto delivery and performance of the solution, Sidel supported Rayyan with its decade-long experience as a full solution provider, lowering Total Costs of Ownership and overall energy consumption.

The global bottled water market has witnessed a significant increase since 2011 with the demand for premium water growing each year. The lack of well-developed public water facilities in some parts of the world and the modern customer's changing lifestyle, coupled with the search for functional bottled water, is also expected to fuel both volume and revenues of this industry.

In the GCC¹ region, this market has been growing exponentially as many consumers are shifting towards bottled water, with Qatar having one of the highest consumptions of water per person.² This positive trajectory is especially driven by an increasing disposable income with end users looking for products with added health benefits or flavours, as such resulting in burgeoning product differentiation: many new product launches offer consumers more convenience as well as better taste.

<sup>&</sup>lt;sup>1</sup> The Gulf Cooperation Council (GCC) includes The United Arab Emirates, Bahrain, Saudi Arabia, Oman, Qatar, Kuwait and Yemen.

<sup>&</sup>lt;sup>2</sup> Zenith Global Ltd 2017



#### Award-winning premium water now bottled in glass

Khalid Bin Mohammed Al Rabban launched Rayyan Pure Natural Mineral Water in 1984 with the goal of delivering quality products manufactured through state-of-the-art processes and technologies. Since then, the company has been priding itself on high standards and modern facilities, equipped with advanced laboratories and fully automated production lines, so that they are now an award-winning water brand. Rayyan sources and bottles its prized water in a stretch of desert 60 km north of Doha, where the water is drawn from a natural reservoir. It passes through a refined filtration process with zero chlorine to preserve its natural pure and light taste.

Recently, Rayyan decided to leverage the partnership in place with Sidel, who supplied two PET lines years ago (still in operation in their Doha plant). This time, the leading Qatari water producer needed to face a completely different challenge – the first of this kind for them – bottling premium water in glass. Rayyan sought Sidel's flexibility, support and capabilities as a full solution partner to help them throughout each stage from line requirement definition through packaging and line design until delivery and performance of the complete line. This choice allowed the bottler to kick off sales in December 2018, shortening the time-to-market by four months (originally the complete line was planned to start production in the second quarter of 2019) and further cementing the loyal partnership between the two companies. This great achievement was possible especially due to a quick execution phase and an efficient and successful team working onsite. With Sidel and Rayyan operators contributing to an extremely smooth installation of the line, this step took approximately 50% less time than typically needed.

#### Efficient line design and eye-catchy bottles as the basis of success

Mr Khalifa Khalid Al Rabban, chairman of Rayyan Water, notes: "With our exceptionally high standards in respect to hygienic production processes and quality of the bottles, coupled with our mission to minimise our environmental footprint, we were eager to achieve an efficient design of the line as well as incorporate all the next-generation tech options that Sidel could offer. We needed to accommodate three different bottle formats, 250, 500 and 750 ml across still and sparkling water, in varying pack configurations."

Sidel's globally renowned line engineering expertise proved key when designing the new complete glass line at the Doha plant, offering full protection for the product both in terms of hygienic and organoleptic aspects. This step was particularly challenging as Rayyan decided to install this line in an existing area of the plant, therefore facing considerable space constraints. With projected output at 8,000 bottles per hour (bph), this line has been designed to accommodate any potential upgrade.

The Qatari water bottler wanted the new glass bottles to stand out on the shelves as sleek and elegant as possible without compromising the performance of the line. This is where Sidel's



long-standing packaging capabilities came into play. In less than 25 days, the company's designers, engineers and material experts – in close collaboration with the customer – industrialised bottles with a chic, elegant and classically European look, proposing the most aesthetically pleasing dimensions and types of plastic labels to be applied on the neck and the body of the bottle.

Rayyan chose Sidel's proven Roll Adhesive labeller, designed to handle labels with increased efficiency, while ensuring great stability and precision in the process. Ensuring high flexibility and labelling quality, it can process a wide variety of containers of different shapes and sizes. Importantly, to accommodate any future shifts in their production needs, Rayyan chose a configuration featuring three labelling stations to apply up to three labels on one single bottle, without any impact on the performance of the line.

#### Maximum agility with no compromises on product care

On top of highly efficient line design and careful line regulations, the complex shape and fragile material of the Rayyan bottle required Sidel to install Gebo advanced conveying solutions at the Doha plant, ensuring reduced downtime, agile production and perfect bottle quality. Starting with AQFile: this reliable, single file accumulation system, with nearly no limitation on types of packaging material, shape and size, delivers great efficiency and ease of operations to Rayyan, together with unique versatility. The latter one is ensured by the possibility for immediate adjustment of the accumulation size to production needs, coupled with minimum settings required for format changeovers. With its low friction and mechanical constraints, Gebo AQFile also brings maintenance costs down to the bare minimum, contributing to an optimised TCO.

In addition, with multiple bottle formats and case configurations to manage, Rayyan decided to leverage Sidel's 360° approach to wrap-around mechanisation, underpinned by gentle primary packaging handling and extended secondary packaging knowledge, demonstrated by more than 1,200 machines installed worldwide. Therefore, the Qatari company opted for the Cermex WB46 wrap-around case packer, offering excellent performance in terms of flexibility, hygiene and ergonomics due mainly to a new automation platform, thermoplastic polyurethane timing belts and quick-release systems for format changeovers.

After a mass flow accumulation, the bottles are distributed into lanes by an alternative vibrating device ensuring a soft packer feeding. Then, due to their complex shape, they are transferred to the cases by a Pick and Place movement. This helps maintain the batch's perfect configuration at all times. Combined with a motorised infeed conveyor, the bottle accumulation is performed without pressure.

A specific feature in the Rayyan line set up allows for the arrangement of labelled bottles either to the clustering machine or directly to Cermex WB46, which is able to handle loose bottles and



manage them also in large-size cluster configurations. Additionally, for greater uptime, this wrap-around case packer features the company's brand-new, user-friendly human machine interface (HMI), which is based on an intuitive, tablet-approach navigation and offers rich media tools for preventive maintenance procedures.

#### Operational intelligence to support continuous improvement

Harbinder Kathuria, Vice President Beverages Equipment Sales Middle East, Africa & India at Sidel adds, "Rayyan is focused on continuous improvement and relentlessly looking for decreasing unplanned downtime, reducing waste and costs, and increasing the plant's output. This is why our EIT® (Efficiency Improvement Tool) came as the natural choice. This market-leading data acquisition and plant intelligence system is a universally proven solution, automatically recording 24/7 raw production data, calculating a wide array of KPIs to help measure performance, analysing production issues, detecting efficiency loss sources and performing root cause analyses. Currently installed in more than 70 countries, EIT gives employees at all levels of the organisation real-time access to relevant and actionable information on production-related issues."









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Sidel is a leading provider of equipment and services solutions for packaging beverage, food, home and personal care products in PET, can, glass and other materials.

With over 40,000 machines installed in more than 190 countries, we have nearly 170 years of proven experience, with a strong focus on the factory of tomorrow with advanced systems, line engineering and innovation. Our 5,500+ employees worldwide are passionate about providing solutions that fulfil customer needs and boost the performance of their lines, products and businesses.

Delivering this level of performance requires that we stay flexible. We continuously ensure we understand our customers' changing challenges and commit to meeting their unique performance and sustainability goals. We do this through dialogue and by understanding the needs of their markets, production and value chains. In turn, we apply our solid technical knowledge and smart data analytics to ensure lifetime productivity reaches its full potential.

We call it **Performance through Understanding**.

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