

The intelligent drainage that prevented the flooding of the Guadalajara Metro.

An emergency solved with the innovative Flygt Bibo Alpha.

Emergency drainage in a Guadalajara Metro Station.

The Guadalajara Metro-belonging to the Urban Electric Train System (SITEUR) transports up to **360 thousand users** daily. Its continuous operation is essential for the community to be able to move.

One of the stations with the highest public traffic is the Estación de la Independencia. This is a large underground work and inside there is a pumping station whose function is to control the risk of flooding from rain levels or the groundwater level of the tunnels and to be able to guarantee the continuity of Train operations.

But at the end of 2021 the station failed. And the flood alert went on.

A big city. Huge traffic. A big challenge.

The city of Guadalajara is located in the state of Jalisco in western Mexico and has 3 lines of electric train system. The control of its operations is always attentive to the prevention of risk situations.

When the flooding emergency at the Estación de la Independencia arose, their professional teams agreed to consult the Xylem solution with complete confidence. SITEUR quickly contacted our Xylem specialists with a very specific request for help: **to avoid a risky situation at the station and continue to provide a quality service for its users.**

Timing is crucial. Flygt Bibo Alpha is smart and knows it.

Time is the enemy in a flood situation. Xylem solution to be applied had to include **simplicity and adaptation to the installation site.** Also respond quickly in terms of non-stop operation to achieve the success of the operation. The client's requirements on the drainage and its total control to avoid the flooding of the Metro in a short time, marked the challenge.

The solution of the Xylem technical team was through the most efficient and simplest innovative Plug and Play pumping system: Flygt Bibo Alpha. **Its ease of assembly, the simplicity of its start-up, the autonomy of its operation** gave the answer in time and shape the contingency presented.

Flygt Bibo Alpha operation: on time - remote - effective.

Flygt Bibo Alpha arrived at the pumping station in November 2021 with the mission of avoiding the flooding caused by groundwater reaching the electric train station and evacuating it without any overload or effort.

Once installed, the system allowed the level of the well to be controlled 24/7. Programmed to maintain the well water at a non-hazardous level, using the advantage of the sensor and intelligence built into the pump.

The ability to regulate speed and power to couple to the hydraulic system of the pumping station was a major point: Flygt Bibo Alpha used the energy in the work that is required, without impacting the hydraulic and electrical systems of the station.

Today it is 5 months of continuous operation. The performance is maintained and ensures the correct development of the transport activities of the Metro for the entire city of Guadalajara.

Client: SITEUR – Guadalajara City, Jalisco, México.

Challenge: Prevent flooding on the Metro circulation line with a solution that is fully adapted to the affected Station.

Solution: Flygt Bibo Alpha, the world's first drainage pumping system with built-in intelligence, simple plug-and-play mounting.

Results: Monitoring of the crisis at 24 hours and then sustained operation 24/7 with intelligent remote control.



Flygt Bibo Alpha



Pump installation pit at the foot of the track.



Flygt Bibo Alpha is light and it does not need a crane for its installation.



On-site programming at level operation mode.

Making the complex simple: the Flygt Bibo Alpha commitment.

From the first moment of assembly of Flygt Bibo Alpha, the operation supervisors of the Estación de la Independencia were surprised with a simpler to operate, compact and robust equipment for the application than other known ones. The enormous ease of commissioning was evident as it proved to be a superior and lighter technological solution than traditional equipment when installed in the well.

Its operation was immediate, just Flygt Bibo Alpha was connected and started. The great differential of automatic operation and reliability established an impact conformity on our client: **he decided to purchase Flygt Bibo Alpha system** and is looking to schedule more replacements with this new technology in similar stations in the future.

Flygt Bibo Alpha: Intelligence came to power.

Flygt Bibo Alpha is the first intelligent drainage pump on the market, it adapts to any flow and height requirement with greater durability. It is extremely robust, compact and reliable. It is a true Plug and Play: with the ease of plug and play, and at the same time, create significant energy savings (up to 70%).

The easy installation of the equipment and its dimensions and weight made it possible to dispense with additional equipment, such as cranes for lifting and location on the ground. With only two operators, the installation and start-up of the equipment could be solved, which directly impacts the savings in the costs of the operation.



Pump installed and running.

“It is interesting that Flygt Bibo Alpha does not need a control panel for all the features it performs. It is surprising its smaller size that facilitates its handling and installation”.

Alan Francisco López Castillo.
SITEUR Maintenance Supervisor