



ISTOBAL

**Efficient production of customised
vehicle washing systems**

Tailor-made complete solutions for vehicle wash & care

COOPERATION WITH ISTOBAL

Select programme, wash. The procedure for washing a vehicle is very simple. Inside the systems, however, complexity sets in: Depending on the washing programme, different chemical substances have to be mixed precisely with water. The sometimes expensive and aggressive substances also place high demands on the materials of the components used. The Spanish company ISTOBAL designs and manufactures integrated solutions for vehicle wash and care according to the requirements of its customers – from self-service systems to washing gantries for trains. For more than two decades, the automation wash specialists have relied on Bürkert's know-how and solutions.

Experienced and flexible partners

Since 1950, ISTOBAL has provided the vehicle wash sector with innovative products for excellent vehicle care that guarantees an outstanding user experience. The company exports its products to more than 80 countries, working with an extensive network of distributors around the world. ISTOBAL has ten subsidiaries as well as four manufacturing and final assembly plants in Europe, the Americas and Asia. Over 70 % of the production corresponds to international sales.

The automation wash specialists are known for their rapid production of customised washing systems. This is not least since ISTOBAL builds many of the systems in its units in-house. The washing solutions are manufactured highly efficiently in batches, and only three to four weeks after an order is received, they are usually ready for delivery. The equipment manufacturer must always have the confidence that the complete quantity of all required components is delivered on time to enable production to be carried out so quickly.

“With specific developments, Bürkert has always enabled us to differentiate our products from those of our competitors.”

**Salvador Torregrosa, Project Engineering Leader,
R&D+i – Jet Wash & Accessories**



Did you know?

Up to four units of Bürkert's compact type 0287 manifold block solution can be arranged in a modular way to obtain the desired number of channels. With the "kick and drop" coil technology, over 80% of energy can be saved compared to conventional solenoid valves. This also reduces calcification and increases the service life.

When it comes to solutions for fluidic processes, the company relies on Bürkert. These include robust solenoid valves for mixing substances and for emptying and filling fluid reservoirs, precise flow meters to determine water consumption during the washing process, but also individually developed high-pressure valves, which are used in cleaning systems for commercial vehicles, cars and trains.

“In addition to the high flexibility in delivery, the broad know-how on fluidic processes of Bürkert’s engineers also contributed to our long-standing and really good business relationship. With specific developments, they have always enabled us to differentiate our products from those of our competitors,” Salvador Torregrosa, Project Engineering Leader for jet wash systems and accessories at ISTOBAL, is aware. Bürkert’s advice on dealing with high pressures and the mixing and micro-dosing of a wide variety of expensive chemicals has been incorporated into ISTOBAL’s systems at numerous points.

Robust and compact components

The company’s systems are individually adapted to the needs of its customers. The space in the control cabinet is limited: A total volume of only about 1.25 m³ is available for all the components that have to be installed inside. ISTOBAL therefore attaches great importance to the compactness of the products used. At the same time, it is extremely important that continuous operation can be ensured in the harsh environmental conditions to avoid failures as far as possible and to reduce maintenance efforts to a minimum. “It is vital that our customers can rely on the function of their systems. Inside the narrow control cabinet, it is hot and humid. We also use a lot of chemicals in the washing process. The valves must therefore withstand numerous stresses,” explains Salvador Blasco Sanchez, who is responsible for the design of the self-service washing systems at ISTOBAL.

For removal of the roughest dirt before the actual washing tunnel, type 6240 servo-assisted 2/2-way piston valves from Bürkert are used, which are made of stainless steel 316. These enable reliable operation even when processing aggressive substances: “The valves are highly resistant to corrosion, withstand high pressures and have a low creep resistance. As a result, leakages are avoided even when hot and cold water is constantly mixed,” Salvador Torregrosa adds.



Servo-assisted 2/2-way piston valves of type 6240 ensure that the roughest dirt is already removed from the vehicles before the washing tunnel with water quantities of up to 12.5l/min. To increase pressure and leakage safety, the stopper and plunger guiding tube are welded together.

And should water ever leak inside the control cabinet, ISTOBAL can be confident that the function of the valves will not be affected, as they are IP65-certified. Every single Bürkert coil also undergoes a demanding run-in test before it finds its way into ISTOBAL’s installations. The exceptional reliability is very reassuring for the equipment manufacturer.

“Inside the narrow control cabinet, it is hot and humid. In addition, we use a lot of chemicals. The Bürkert valves withstand these stresses. They give us confidence in the reliable operation of our equipment with low maintenance costs.”

Salvador Blasco Sanchez, R&D Mechanical Engineer

Modular manifold block for efficient production

The mechanical construction of the systems is identical. However, the inner design differs among other things in the number of pumps and channels for the chemicals, depending on the selectable programmes. This is why ISTOBAL relies on a modular approach to mix the media: up to four type 0287 manifold block solutions can be assembled by the technicians at ISTOBAL to achieve the desired number of channels. “We developed this block 25 years ago especially for car washing applications. It is still used almost unchanged today. Obviously, we have found the optimal solution for ISTOBAL here,” says Gerardo Rubira, Industry Sales Manager at Bürkert, happily. Only the solenoid valves originally used were replaced a few years ago by even more resistant types. Their polyamide-glass-fibre mixture withstands pressures of up to 10 bar. All other components of the block have remained unchanged ever since.

The manifold block is connected to the different water reservoirs of the system. Based on the programme selected by the customer, the corresponding valves are activated. Chemicals are injected, and the water passes through the high-pressure pump to the spray lance.

Cost-saving operation

Remote access via cloud allows ISTOBAL to always keep an eye on the status of its assets. Thanks to the connection of the Bürkert valves to the central control system, ISTOBAL is aware of the use of the valves and can plan maintenance work. “It has been proven that the seals of our valves only need to be replaced after about half a million operations,” explains Gerardo Rubira the low maintenance costs.

Another key advantage for ISTOBAL: The modular approach significantly reduces inventory of spare parts for the 75 sales countries worldwide, Salvador Torregrosa is pleased to say: “Our service technicians and also those of our partner companies use the same components worldwide. The manifold block design from Bürkert reduces the number of component variants in stock. It is also much cheaper to ship small spare parts than larger and heavier units that consist of one piece.”

And should ISTOBAL’s customers want to expand their systems with additional washing programmes in the future, this is also easy to realise thanks to the modularity of the system.

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