

Hayaller Tasarımın Öncüsüdür

Dreams are the Pioneer of Design

TÖZMER®

Automatic Car Wash Systems

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TREN, TRAMVAY & METRO YIKAMA SİSTEMLERİ

Train, Tramway & Subway Washing Systems

TOZMER - AUTOMATIC WASHING SYSTEMS TECHNOLOGIES

TREN & METRO, TRAMVAY YIKAMA SİSTEMLERİ

Train, Tramway & Subway Washing Systems



Train Wash type Automatic Train, Tram and Metro Washing Facilities are designed and manufactured as mobile and stationary facilities according to the models and types of vehicles to be washed. In stationary facilities, washing operations are applied to vehicle surfaces by passing the vehicle through the facility at a constant speed. In mobile facilities, the vehicle stationary washing system is mobile. According to the location of the facility where the systems will be installed, vehicle types and buyer demands, there are many types and specifications of different models.

Train Wash only washes the side surfaces of ST type vehicles of our model. The STR type washes the front, back and sides of the vehicles. Optionally, the lower chassis washing, horizontal brush, upper corner brushes with a 45° angle, high pressure washing units, chemical dirt softening units, shampoo and varnish belts and drying unit can be added to our models depending on the buyer's request.

The washing plant operates fully automatically with PLC Computer control with all its units and it is ensured that it can be controlled from a single center.

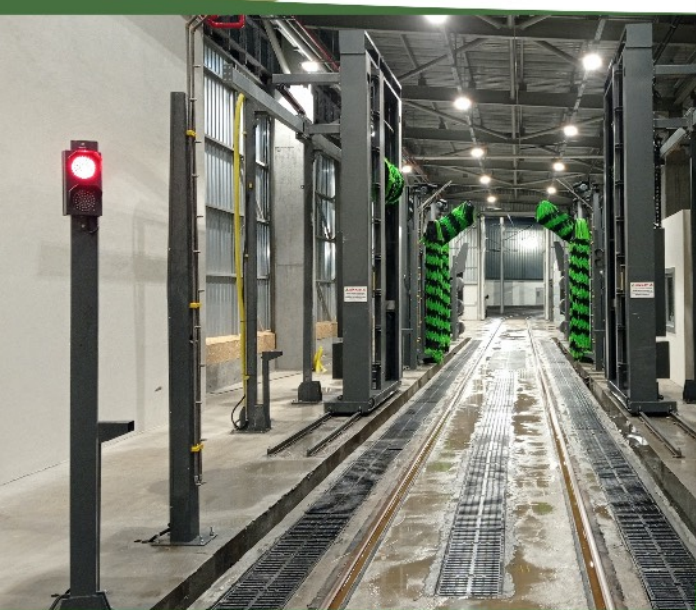
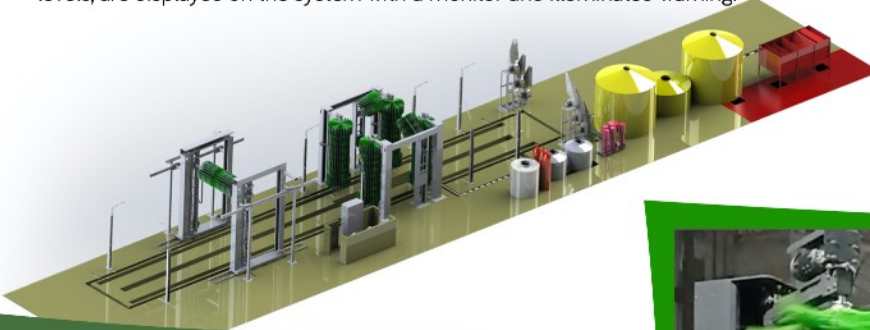
A SCADA system and a System for Viewing the Operating Status of washing Units are available. Thanks to this system, it is possible for the user to obtain information about the control, control, operating status and malfunctions of the car wash units.

The operating stages of the units - units within the system can be monitored instantaneously via the monitor located on the main control console that provides control of the system. Through the monitor of the system failures of units; the control of the water pump, water temperature, air and water pressure, the facility's energy use, water and chemical consumption, washing brush all units, moving the rear surface of the front wash (Nasal Wash) washing of the unit is displayed on the monitor information such as the current position and the process conditions. Critical levels, especially related to water and chemical levels, are displayed on the system with a monitor and illuminated warning.



Train Wash Tipi Otomatik Tren ve Tramvay, Metro Yıkama Tesis Projesi.

Train Wash Type Automatic Train and Tram, Metro Washing Facility Project.



PRE-WATER, DETERGENT, SHAMPOO, POLISH SPRAY BELTS

The final rinsing process is applied to the vehicle that has completed the washing process with V-jet type nozzles using softened mains water with a pressure of 15 bar.

The surface of the vehicle that has completed the washing and rinsing process is sprayed intensively with 3.5-4 bar pressurized water and a special desiccant varnish and the water is prevented from holding on to the surface of the vehicle before the drying process.

The final rinsing and polishing water is to be taken from the mains line and used through the softening device.

The water passed through the softening device will be descaled and stains will be prevented on the surface of the washed vehicles.



AUTOMATIC MOVABLE NOSE WASHING UNIT.

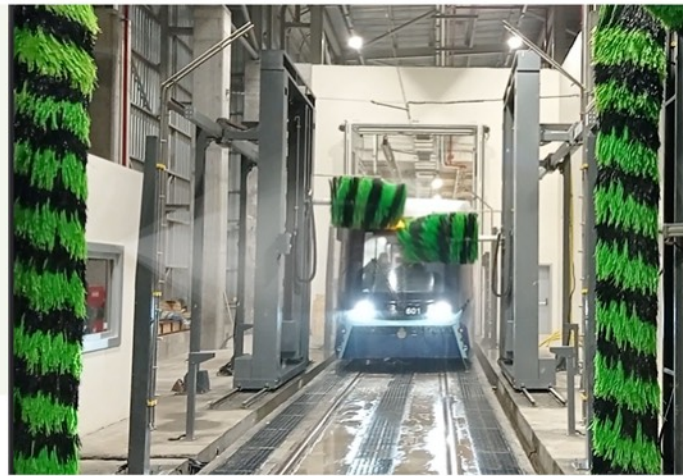
Located on both sides of the train track and running parallel, It is to wash the front, rear and side surfaces of the vehicles by brushing at one time.

The vehicles that will be washed in the Front, Rear and Side Surface Brush washing unit are stationary, the washing unit is mobile.

The washing unit is designed and manufactured to have automatic brushing automation when it comes to the specified area with the Vehicle signaling system on the move.

System of washing two separate independently of each other on the bridge walking to the right and left the front and rear portion of the vehicle will be manufactured for washing, which moves to the left and right by turning the horizontal angle brush system, closed-circuit system with a sprocket on the front and rear surfaces of the vehicle zoomed in and removed by the washing process takes place.

There are chemical dosing and spraying systems on nasal washing units.



BRUSH WASHING UNITS

The Roll-Over Brush unit is located on the main construction consisting of two separate groups. It has a closed-circuit skid system provided with electronic engine control for vertical brushes to approach and move away from the vehicle surface. On the other hand, the pressure control applied to the vehicle surface is provided by inverter power controllers and is designed to achieve a quick wash. The washing unit will have a technical feature such that it can be controlled manually via the operator control panel.



WATER SWEEPING AND DRYING UNIT

It is ensured that the vehicle is dried with high-speed blown air; the rinsing and polishing process is completed and the water on the surfaces is swept away by the air blown by high-speed fans to remove the water. There are fan - motor groups for blowing air located at different angles on the main construction. The compressed air blown by high-speed Fans is designed to be delivered to the vehicle gradually, ensuring maximum surface drying efficiency.



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SYSTEM CONTROL ROOM

The Train Washing plant operates fully automatically with a control center and computer control with all its units, and the system can be controlled from a single center.



CAMERA CONTROL SYSTEM

The CCTV System monitors all the washing operations carried out from the entrance to the Washing Plant of the Train to the exit, respectively, and simultaneously displays all aspects of the vehicle on the screen, as well as follow-up control of the operations and it can be applied to the washing plant with different camera units to ensure that it is recorded. Jul:



WASTEWATER TREATMENT AND RECOVERY SYSTEM

Waste water treatment and recycling system setup, oily waste water recycling plants, used in washing the dirty water and dirty water for washing plant with the goal of saving in order to be purified and recycled back for use in waste water treatment and recycling system kurulabilmektedir the facility if desired.

It is ensured that the established Wastewater Treatment and Recovery system works efficiently, fully complies with the operating and operating conditions of the existing washing plant, and is integrated into the plant.



DE-ICING, ANTI - ICING AND WATER HEATING SYSTEMS

During the cold days of winter, ice masses and snow and ice accumulate on the chassis and bogies of trains.

This causes damage to the train's connection components, cables, critical components such as bearings and brakes. In order to clean these accumulated ice floes, pulsed hot or cold and de-icing systems are installed with the application of de-icing chemicals.

It is necessary to prevent the accumulation of snow and ice on the surface of the vehicle. Therefore, an Anti-Icing Unit can be installed at the exit of the Car Washing Facility, where a mixture of heated water and chemicals can be sprayed onto the bottom and side surfaces of jul-bogie vehicles, if desired, on a clean vehicle.

Tren, Tramway ve Metro Yıkama Sistemi / Train, Subway & Tramway Washing Systems

PRESSURE CHASSIS AND BOGIE BOTTOM WASHING SYSTEM

It is ensured that the lower surface of the vehicles, the bogie assembly and the inner side surfaces of the wheels are washed with high pressure cold or hot water at a pressure of 15 – 50 Bar depending on demand. In addition, thanks to the use of a detergent spraying unit under the chassis that can be installed, the bottom washing efficiency can be increased.



ROTOWASH - HIGH PRESSURE WASHING OF THE SIDE SURFACE OF THE LOCOMOTIVE BOGIE

The contamination formed on the bogie side surfaces of trains is perfectly washed off the bogie side assembly and wheel outer side surfaces of the train in motion thanks to the automatic use of stainless rotors and impact rotating nozzles with a special design with high pressure cold or hot water. The system works with a separate water tank and a high-pressure pump.

It works automatically thanks to the detection of vehicles entering the washing device by a photocell on the go.



HYBRID BRUSH & HIGH PRESSURE ROBOT WASHING

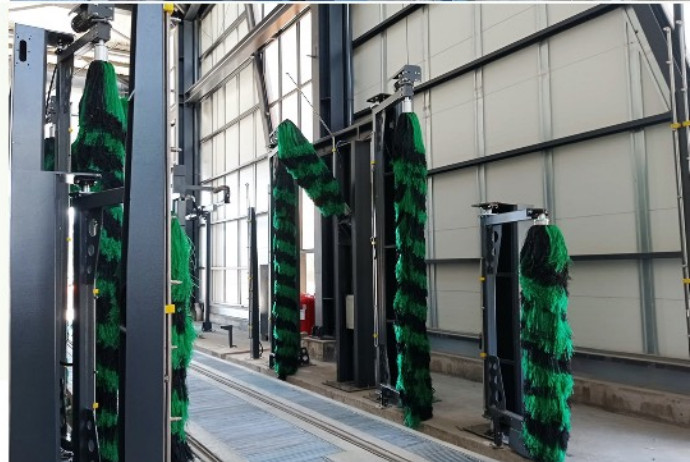
It is a high pressure washing unit consisting of Rotopower type Nozzle directories that spray water at a pressure of 80-100 bar to remove heavy dirt and oil before the brushes touch the sides and parts of the vehicle.

The high-pressure washing system consists of special turbo jet nozzles that can rotate and spray pulsed water, move to the right and left.



SIDE SKIRT BRUSH UNIT

Side Skirt Brush Unit; The vehicles to be washed are washed by brushing with water sprayed on the side skirt surfaces. Movable upright brush blocks are opened by pneumatic cylinder piston force.





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Otomatik Araç Yıkama Sistemleri

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