# METAL CLEANING

EVOLUTION

Teknox

INDUSTRIAL DIVISION

INNOVATION

# COMPANY QUALITY

TEKNOX has been working in the industrial washing machine sector for more than 50 years. The company is specialized in consulting, design and construction of washing machines for industrial sectors such as the MECHANICAL, AUTOMOTIVE, AEROSPACE, RAILWAY, SHIPPING, PLASTIC, WOOD, FOOD, SILKSCREEN PRINTING AND PHARMACEUTICAL.

The objective of the company has always been the constant search for and development of innovative technology.
Thanks to this technology, our company is able to provide the most effective solutions for all the difficulties connected with surface treatments and specific washing quality requirements.

- The purpose of constant innovation is to improve quality and to respect always more the safety of the end-users and the environment.
- Our innovations aim to reduce energy consumption and to lower emissions into the atmosphere.
- This new technology protects the environment by using exclusively special water-based detergents, particular methods of filtration and the highly selective separation of contaminants and treatment of the baths.
- The use of stainless steel in the construction of our machines guarantees durability and end-users are protected by elaborate active and passive safety systems.

## INSPECTION AND TESTING

The control of components on arrival, their standardization and codification, and control during installation make the production process safe and not prone to errors and/or defects.

## SAFETY

The standardized European Norms relating to machinery for industrial washing have been operative since 2005. These regulations, codified as EN 12921, were established by the Technical Committee CEN 271, the European institute responsible for developing standard regulations.

# CLEANLINESS

Many industrial sectors and technology require use of components and mechanical parts perfectly free of contaminants. The control of the level of cleaning “Cleanliness” is particularly important in mechanical industries, automotive, aeronautical, aerospace and instrumental.
TEKNOX has an internal laboratory to control “Cleanliness”, this equipment and know-how is at the disposal of our clients to guarantee the washing results required in the design phase. We are also able to offer all the components necessary for our clients to carry out washing tests independently.

# TECHNOLOGY

Each system is designed and constructed from tested standard modules that are tailored to the specific needs of our clients.
The latest TEKNOX machines are based on new technological solutions and patents:

- **The jet “comb” system,** thanks to the technology of laser cutting, ensures complete washing coverage at a constant pressure;
- **Advanced filtration systems,** installed in series or in parallel, to minimize the amount of solid contaminants suspended in the washing liquid;
- **New condensation systems** to reduce the emission of water vapour in the atmosphere;
- **Constant updates to the logic of the machines,** thanks to user-friendly devices and control software with energy-saving functions, weekly programming of heating and management of maintenance schedules.

SOLUTIONS

Line of machines for the automatic processing of pieces of small and medium size. An excellent quality of washing is obtained by the use of special jets and a slow rotation of the basket. The high number of customizations and accessories available makes these machines suitable for every requirement.

MECHANICAL

MOULD WASHING

# UNIX SZD
# UNIX 2B

PARTS WASHER
WITH ROTATING BASKET

FLEXIBILITY

FLEXIBILITY

This system has been designed to be able to obtain a high degree of cleaning of very complex parts. Designed for robotic control, its compact dimensions allow easy insertion into robotic islands, however, it can also be controlled manually by an operator.
The minimum cycle time is approx. 120 seconds and may vary depending on the process required.
The project starts from a study of the surfaces of a 3D model of the object to be washed and the design of the housing. Then the washing treatment of the external and internal surfaces is studied with the millimetric positioning on all six faces of the washing and blowing mechanisms.

MECHANICAL

AUTOMOTIVE

AEROSPACE

# ROBOCLEAN

CALIBRATED-WASHING
FOR ROBOTIC ISLANDS


ACCURACY

ACCURACY

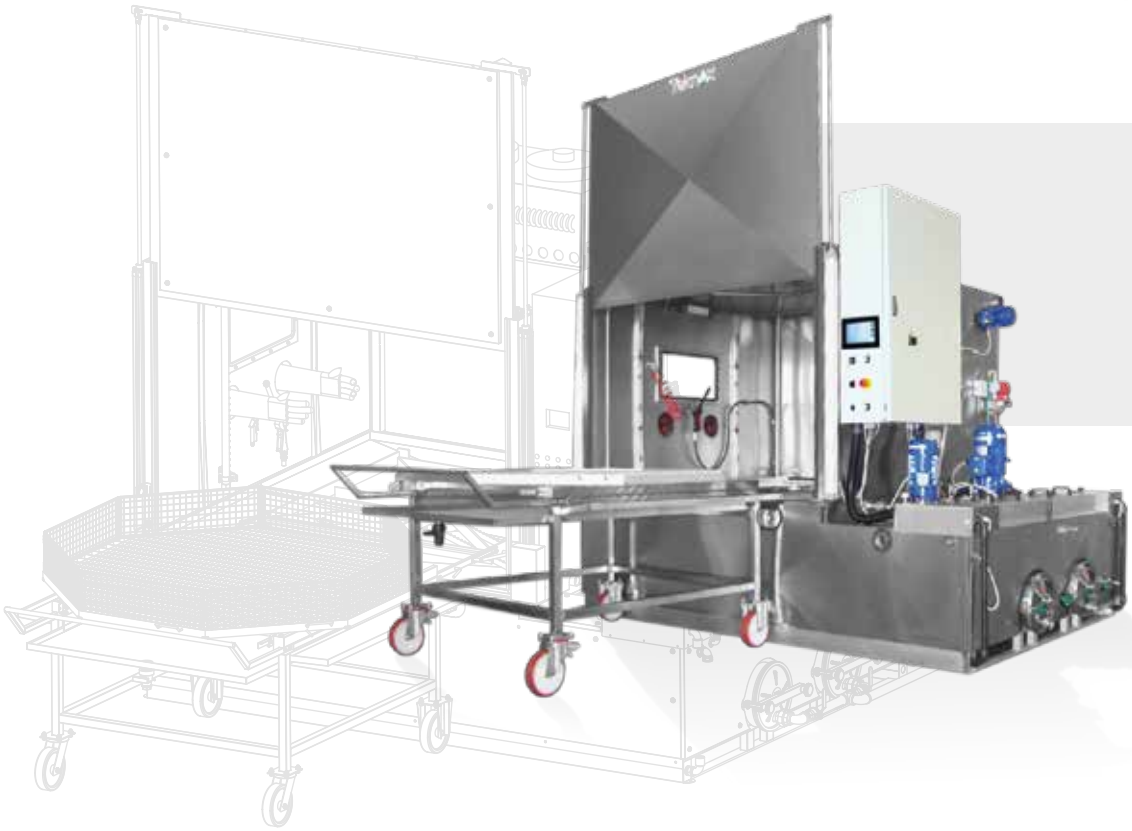
Line of machines for the automatic processing of pieces of large sizes and weights. Present in industries around the world, these machines have been updated in the course of the decades to improve reliability and the quality of washing. The high number of customizations and accessories makes these machines suitable for every requirement.

MECHANICAL

MOULD WASHING

# ROBUR 1B
# ROBUR 2B

PARTS WASHER
WITH ROTATING PLATFORM
FOR LARGE VOLUMES
AND WEIGHTS



SOLIDITY

SOLIDITY

The working cycle consists of six phases. Starting from the loading station, continuous rotation (step-by-step) allows movement through the subsequent phases of treatment until the piece returns to the initial position for unloading.
Even if designed to be controlled by a robot (positioning accuracy of +/- 0.5 mm), it can also be managed manually by an operator. Cycle times begin from 10 seconds a piece.

MECHANICAL

AUTOMOTIVE

AEROSPACE

# ROUNDJET

CALIBRATED-WASHING
*STEP-BY-STEP*
FOR ROBOTIC ISLANDS

QUICKNESS


# ROTOR

IMMERSION WASHING
IN BOX
WITH HERMETIC CYCLE

This model, modernized in 2014 in its appearance and functionality, uses innovative integrated technology to guarantee the quality of the process. The software enables the selection and programming of the treatment required: washing hydrokinetic immersion, spray cleaning, ultrasonic cleaning, blowing with compressed air, hot air drying and vacuum drying.
The high number of customizations and accessories increases the flexibility of the system.

MECHANICAL

AUTOMOTIVE

AEROSPACE

HARDWARE

TECHNOLOGY

# TUNNEL

## TREATMENT MULTI-STAGE SIMULTANEOUS IN LINE

The system consists of several treatment chambers to carry out washing, rinsing, blowing and drying of the part. Depending on the requirements, it can be single-stage or multi-stage, compact in size or with a length of more than ten meters. The particular construction TEKNOX minimizes the mixing of liquids in the case of multiple tanks.

These systems can be divided into two main groups:

- by conveyor belt (horizontal or inclined),
- by dedicated pallets (for one or more different parts).

Depending on the requirements of the client, the movement can be rectilinear, in a closed system (oval), with a return conveyor belt or roller, integrated with systems of automated recovery (pick and place), connected and interfaced to existing handling systems both in loading and in unloading.

Some operations are performed simultaneously, while others are activated only during the actual passage of the piece. In the *step-by-step* tunnel, on pallets, specific treatments can be inserted such as washing at high pressure by means of mobile or robotic nozzles.

The production cycle time defines not only the speed of the conveyor but also the size and composition of the phases of the system.

MECHANICAL

AUTOMOTIVE

AEROSPACE

MOULDING

INTEGRATED AUTOMATION

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