Machines, systems, products and technologies
for surface treatment

Catalogue

CUSTOMISED SOLUTIONS FOR PRECISION CLEANING

FOUNDED IN 1989
ON THE BASIS OF PREVIOUS EXPERIENCE IN THE WASHING INDUSTRY, MEG IS TODAY A WELL-ESTABLISHED ORGANIZATIO N IN THE SURFACE TREATMENT BUSINESS AND REPRESENTS A VALID INTERLOCUTOR FOR WHOEVER IS LOOKING FOR PRACTICAL SOLUTIONS TO ALL WASHING PROBLEMS.

Due to the experience aquired over the years and the continuos investment on research and development, MEG is recognised as industry leader regarding the technological innovation. Taking advantage of an innovative parametric 3D design system and an avant-garde test laboratory, our team work closely with our customers to define and realise the best solution to any complex requirement. Specialised technicians with several years' experience are always ready for a fast and promt technical assistance for any necessity concerning the use of the machinery or their maintainance.

The company is certified ISO 9001:2008.

Green: environment and health

MEG's main ambition is maintaining its commitment in the respect of the environment, supplying low energy consumption machines, produced with technologies and products that minimise environmental impacts. With proud and determination we propound this philosophy in the solutions we provide and every operating method. We are internationally recognised, not only for our "green" choice, but also for the highest attention to the health of users.

We try to hold even our customers responsible. Hence our total refuse to use traditional solvents, substituting them with New Generation ones, non-flammable, low boiling and non-ozone depleting substances. Some of the arrangements of our machines are the introduction of the total heating pump, which permits a 50% energy consumption reduction, and the use of biological agents that, even guaranteeing excellent performances, do not produce any toxic residual.

Precision Mechanics

Machines and installations for the cleaning of mechanical components and small parts after mechanical process such as turning, milling, rectification, lapping, grinding and cleaning.

Jewellery

Cleaning of gold and silver chains. Various types of precious stones contaminated by processing oils, cleaning pastes and fingerprints.

Electronics

Cleaning of electronic boards, components such as relays and sensor, diode and serigraph devices. Electronic boards conformal coating.

Optical/Eyewear Frames

Machines and installations for the cleaning of processing oil from small parts and eyewear components. Cleaning of frames, metal and plastic stems after they have been stamped and pre-treated before painting. Eyewear before they are packaged. Machines and installations for the cleaning of lenses and moulds for lenses.

Automotive

Machines and installations for the cleaning of engine components: fuel injectors, turbine, cylinders, etc. Cleaning of brake components: bearings, pistons, discs, etc., and components in carbon fibres.

Watchmaking

Machines and installations for the cleaning of various watchmaking components such as cases, wristbands, closures, bottoms, dials, minute-hands or second-hands, caps, glass and moving parts contaminated by oil and polish pastes. Cleaning of components in carbon fibre from protective varnishes and oils.

Medical

Machines and installations for the cleaning of components for dental implants, orthopaedic prostheses, surgical instruments, needles, filters, etc.

Aeronautics - Aerospace

Cleaning of components for laser systems and electronics boards. Cleaning machines for aeroplane overhaul/maintenance sector and various components, springs, turbines, etc.

Altre applicazioni

Cleaning of polishing and cleaning pastes and cleaning machines for the cleaning before painting and galvanic processes.

Aqueous systems

Aqueous machines and installations are modular systems for water-based processes composed of one or more sections for cleaning, rinsing and drying different components.
On its basic version, the aqueous cleaning process is adapt to satisfy different cleaning needs and particular cleaning problems. We design and manufacture tailored solutions according to different requirements and they can include various stages of cleaning, rinsing and drying.

THE BASIC CLEANING CYCLE:

STAGE 1
Cleaning in hot water and detergent solution activated by ultrasonics

STAGE 2
Rinsing in mains water

STAGE 3
Rinsing in demi water

STAGE 4
Hot air drying

Why ultrasonic cleaning?

The ultrasounds are composed by sound waves with a frequency beyond the limit of human hearing, that is more than 16000 Hz. The diffusion of such waves in the cleaning liquid originates compressions and rarefactions that generate the phenomenon of cavitation, in other words the formation of millions of small bubbles that are made and destroyed at very high speed. The amount of energy in each explosion is limited, meanwhile there are very high localised pressures (1000 atm). These formation and implosion of the micro-bubbles, or empty cavities, make the cleaning through their high pressure and the attack to the impurities at a molecular level.

Solvent systems

A solution that permits to design smaller machines than the aqueous ones.
The main advantages of this type of cleaning systems are the ease and the speed of drying, due to the fast evaporation of solvents, and the absence of oxidation problems. They can be manual or automatic and run with new generation, low boiling, non-flammable and non-ozone depleting solvents.

Hybrid systems

A cleaning process called “hybrid” as it includes both aqueous and solvent/co-solvent solutions. The aqueous solutions (water and detergent) remove “polar” residues, such as flux activators, salts and contaminants from various processes.
The co-solvents, together with the new generation fluorinated solvents, remove the “nonpolar” residues - such as waxes, oils and fluxes – and the final drying. This process has minimum a waste of water, with related waste disposal, and reduced cycle time. Furthermore, when the residuals permit it, with this new method is possible to clean skipping the aqueous stage and going directly to the co-solvent/solvent stage. In addition to a lower water consumption, even cycle times are shorter in respect of a normal aqueous process with drying furnaces.
For example, it will reduce a complete cycle time from 20 to 10 minutes only.

Aqueous cleaning tanks

Cleaning machines in stainless steel, with a tank for the immersion in a hot detergent solution activated by ultrasonics.

Compact solvent degreasers

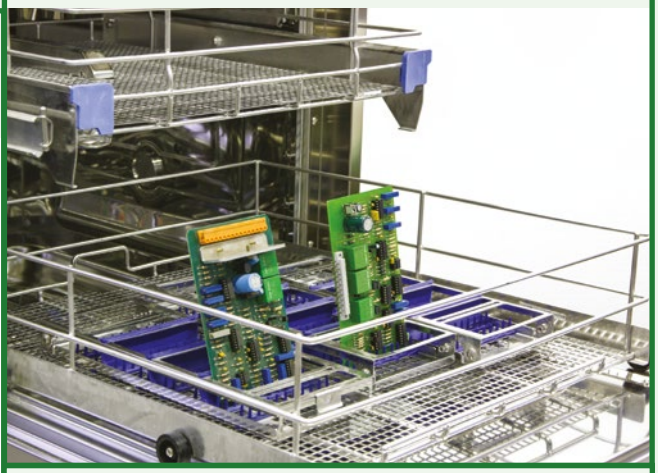
Manual or automatic tanks. These machines are the compact versions of solvent systems. They are ideal for small parts degreasing.

Other technologies for cleaning, drying and coating

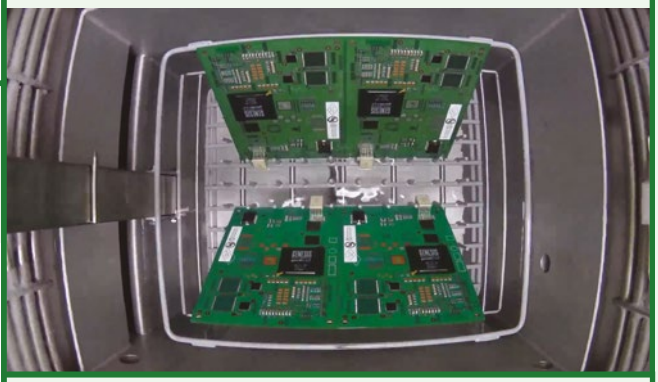
Biological parts washers

Hydrokinetic spray and ultrasonic cleaning systems

Spray washing machines



Electronic boards coating



Hot air drying furnaces and solvent dryers

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