



Global cleaning solutions

## THE FISA GROUP

### Leader in automatic ultrasonic cleaning lines



#### THE FISA GROUP FACTS

- 10 Companies in Europa and North America
- 10.000 lines installed all over the world
- 130 specialized technicians in Europa and USA
- Each Office with local warehouse and service force
- Fully equipped labs with machines for cleaning tests



## AUTOMOTIVE



- Inter-operational cleaning
- Precision mechanics
- Cleaning before PVD deposition and surface treatments
- Bi-component parts cleaning
- Cleaning and protection of parts against oxidation
- Zero-waste cleaning processes
- Parts protection against oxidation

## AEROSPACE AND TRANSPORT

- Cleaning of parts for military and aerospace industry
- Maintenance of parts and subassemblies for aerospace, rail and transport
- Cleaning before surface treatments
- Cleaning before quality controls
- Zero-waste process with protection against oxidation



## OPTICS



- Cleaning of mineral and organic substrates
- Cleaning after surfacing
- Cleaning after Anti-Reflects deposition processes
- Glass moulds cleaning for CR39 and High index lenses
- Injection moulds cleaning for PC and PA
- Air treatment with laminar flow systems
- Goggles frames and masks cleaning before painting

## HC and ANTI-FOG COATINGS

- Hard-Coating machines with dip coating systems for ophthalmic, solar and safety lenses.
- Fully programmable Lift out systems
- Air treatment with laminar flow systems
- Automatic HC varnish and solvent management with Fisa Autocoat ®
- Flow-coating system for single side anti-fog or anti-scratch coatings
- Modular machines for cleaning, coating, pre-curing and final curing for Rx labs and Mass production

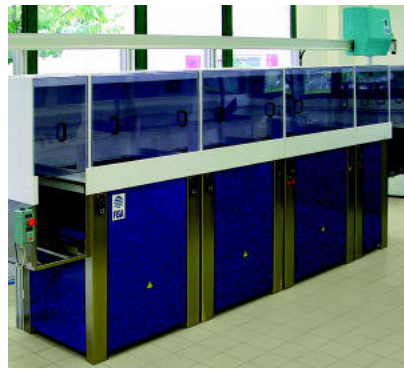


## PRECISION MECHANICS AND SURFACE TREATMENTS

- Precision mechanics
- Watch making
- Surface preparation before PVD and surface hardening processes
- Cleaning before metallization
- Cleaning before surface treatments
- Cleaning before quality inspection
- Vacuum drying systems
- Maintenance



## ELECTRONICS AND ELECTROMECHANICS AND SOLVENT



- Defluxing system for electronic cards
- New generation solvent processes HFE, HFC, etc
- Vapour control system with FISA three cooling areas "deep-cold"
- Semi aqueous systems
- Continuous cleaning system for metal bands and contacts
- Screen printing frames cleaning
- Military and aerospace cleaning processes
- Dedicated ultrasonic transducer with multi-frequency mode
- Mechanical cleaning with spray and flushing systems

## MEDICAL AND DENTAL

- Inter-operational cleaning
- Final cleaning
- Passivation and surface treatment
- Titanium anodization
- Acid surface treatments for stainless steel and titanium
- Air treatment units with Class 100 working areas
- Modular and multi-functional cleaning lines
- Process management Software with 100% traceability
- Pre-sterilization to reduce bio burden



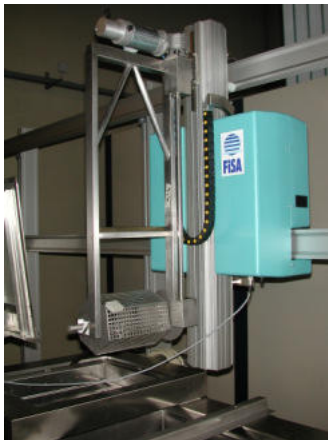
## MOULDS CLEANING AND MAINTENANCE



- Cleaning and protection of moulds and tools
- Residues elimination without damaging the mould surface
- Complete cleaning of all mould surface
- Cooling channels cleaning
- Quick and effective process with mould protection
- Die casting, low pressure and alloys
- Plastic injection
- Rubber moulding
- Glass moulding



FISA KNOW HOW AND EXPERIENCE TO SOLVE YOUR CLEANING PROBLEMS



FISA is producing in Italy all its machines by using high quality components. The entire designing and production process of both mechanic and electronic assemblies is realized internally thanks to FISA proprietary know-how.

All components of FISA machines are designed and produced to be 100% interchangeable with the ones already installed on existing machines.

Ultrasonic generators and transducers, EPROMS, Microchips, process management and monitoring software are developed by FISA technical department and optimized for ultrasonic precision cleaning systems

FISA AUTOMATION AND SOFTWARE

- Communication system: FISA BUS
- PLC shared logic : FISA LCI
- Touch screen panel: FISA DPU
- Automatic programming system: FISA PROJECT
- PC-based monitoring programming software: FISA TR 2000
- Machine monitoring and process diagnostic : FISA DPU
- Production supervision and batches traceability: FISA LOGGER



FIMM DETERGENTS AND WATER TREATMENT ECAFI



To grant a perfect cleaning result, FISA is offering the complete process which includes:

- Water demineralization systems
- Air treatment systems
- Complete detergent range (FIMM)
- Air and water cooling systems

COMPLETE SERVICE TO OUR CUSTOMERS

- Cleaning tests
- Process definition
- Machine design
- production
- Delivery and set-up
- training
- After-sale service

