

MACH 2016 Review Information Hall 5 Stand 5281

UK DEBUT OF AUTOMATED, ULTRASONIC CLEANING EQUIPMENT

Turbex launched at MACH 2016 an Elma automated cleaning line intended for applications where a very high level of precision cleaning is essential. The Elma product range, which covers bespoke, multi-tank cleaning and drying lines down to small bench-top units, is aimed primarily at the high-end use in the optics, medical, and precision manufacturing industries. However, the aerospace, automotive, nuclear, electronics and general engineering sectors are also target markets.

A hallmark of Elma machines is multi-frequency ultrasonics, enabling a single transducer to generate two different ultrasonic frequencies. Cycle times can be significantly shorter and there is the added advantage that dis-similar components and materials can be processed in the same tank.

John Huntingdon, managing director of Turbex, said, "This modular range allows a problem-solving approach to meet customers' needs, especially for processing parts of complex geometry to a superior standard of cleanliness, complete with the requisite chemicals.

“We were looking forward to presenting the equipment at MACH, as it was new to the vast majority of visitors.”

Highly controllable, all-round cleaning

For precision cleaning of small components in an aqueous solution, the Malta was on show for the first time outside Germany. The machine incorporates a spray-flood action, highly controllable kinematics and rotatable ultrasonic oscillators to provide efficient yet gentle cleaning. It is therefore well suited to removal of swarf and grease from delicate components with intricate, difficult-to-reach areas.

Equipped with a rotating spray and drying system that acts on all six sides of the load, the Malta has spray nozzles arranged close to the centre of rotation. It ensures that the entire surface area of components being processed have contact with the cleaning solution, while minimising the spray shadow.

Owing to the special nozzle arrangement combined with an optimised 480 x 320 x 200 mm basket, the machine achieves improved, more homogeneous cleaning in a shorter time. The user benefits from higher process reliability and greater flexibility in arranging the components. Modular build with up to three internal tanks and options such as full immersion and various pump and filtration specifications allow users to tailor the cleaning system to suit their requirements.

Processing of larger components

A heavy duty Turbex aqueous washing machine was on the stand from the supplier's AC-range of front-loading, spray washing and rinsing models. They have proved particularly popular in the UK for degreasing, precision cleaning, phosphating, paint removal, de-rusting and de-scaling.

Manufactured from stainless steel, the AC programme comprises both single- and multi-stage units with options for one, two or three process tanks. Standard sizes range from one to three metres in diameter, although larger machine sizes are available.

These PLC-controlled machines provide a high level of cleaning performance due to ingenious design principles combined with high spray pressures and liquid flow rates achieved by the powerful pump. The spray system, also of stainless steel, rotates around a fixed load that can weigh several tonnes. Acoustic as well as thermal insulation protect operators from undue noise and heat.

Air blast and hot air drying stages are optional, as is gas instead of electric heating. Other optional accessories include steam extraction, automatic refill, an oil skimmer or separator and a detergent dosing unit. A manually operated spray lance with its own impeller pump can also be supplied, allowing particularly awkward soils to be removed. Alternatively, temporary use of the equipment as a manual spray booth is possible.

Ultrasonic tanks

Completing the exhibits were models from the Turbex range of bench-top and floor-standing ultrasonic cleaning tanks, which can be used stand-alone, as bench-mounted units or as part of an integrated modular cleaning system.

Available in a variety of sizes, they feature a welded stainless steel tank, double lid with thermal and acoustic insulation, thermostatically controlled indirect heating in the side walls, and an electronic control with digital time / temperature display. A level guard cuts off the heating and ultrasonics if there is insufficient liquid in the tank.

A variety of options is available, such as stainless steel work baskets, filtration, a storage tank with oil separator, and a hot air dryer.

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The new Turbex Elma high precision, automated cleaning line.



The new Turbex Malta aqueous cleaning machine has a small footprint and maintenance-friendly design.



A heavy duty Turbex AC aqueous washing machine.

On behalf of: Turbex Limited, Unit 1, Riverwey Industrial Park,
Newman Lane, Alton, Hampshire, GU34 2QL.
Tel: +44 (0)1420 544909. Fax: +44 (0)1420 542264.
Email: john.huntingdon@turbex.co.uk
Web: www.turbex.co.uk
Contact: John Huntingdon, Managing Director.

Issued by: *THE RIGHT IMAGE Ltd*
PO Box 42, Twickenham, TW1 1BQ
Tel: +44 (0)20 8891 0603
Contact: Chris Wright
Email: chris@therightimage.net
Web: www.therightimage.net

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