

Guyson finishing equipment

first for finishing

Guyson products for aerospace applications



Over 75 years in the making

Worldwide aerospace customer support



Guyson International Limited has been manufacturing industrial finishing equipment for over 75 years and has built a world-wide reputation for excellence in the design and manufacture of blast finishing, spray wash and 'Kerry' ultrasonic cleaning equipment. The company is registered to both BS EN ISO 9001: 2008 and BS OHSAS 18001:2007 and also a member of the 'North West Aerospace Alliance'. At our Skipton site we have a well-stocked showroom and have recently added a 'precision cleaning facility' for improved customer trials. Guyson also have a large blast and spray wash testing and demonstration room, including a full robotically controlled blast unit, available for customer trials and research and development work. Guyson also has a manufacturing facility in the USA and sales and technical support branches in France, Malaysia and China.

Guyson are a genuine world wide player in the aerospace market providing a wide range of varied industrial finishing products, for such applications as maintenance, repair and overhaul (MRO) work with our Euroblast cabinets and ultrasonic tanks and ultrasonic baths for 'Tam' panel cleaning. Guyson's Orbit rotary basket spray washers are often used for cleaning aerospace actuator components and our fully automated robotically controlled blast systems for shot peening landing gear and the root section of turbine blades. Also manufactured is a comprehensive range of automated ultrasonic precision cleaning equipment for applications such as defluxing Mil Spec PCB's and cleaning power generators; and multi-tank aqueous cleaning units for cleaning turbine blades and incorporation in Ardrex NDT lines.



Guyson International Limited

Manual blast finishing

Wide range of standard and specialist blast cabinets

The Guyson name is synonymous with manual blast cabinets. We have wide range of standard machines in both suction (SF) and pressure feed (PF) and with the premier quality Euroblast product a vast array of 'options' are already costed and drawn so the cabinet can often be easily tailored to specific applications, such as maintenance, repair and overhaul (MRO) of landing gear in a two metre cabinet with additional armholes (below).

Typical manual blast aerospace applications include: the removal of carbon deposits from turbine blades using natural sources with a non aggressive blast media such as corn cob. Or at the other end of the scale, very aggressive blasting for casting investment removal with one of our PF blast systems, using hard angular abrasive blast media. Paint stripping with plastic blast media, especially as part of aerospace MRO is also a very common usage in our larger cabinets, as is removing step lines from rapid prototypes in our smaller ones also the removal of dust and fluff with air only blow off.

Longer items such as tubular components can be fed through the cabinets, with sealed gaiters around the product to stop blast media exiting the cabinet. Whilst heavy components such as castings can either be delivered by crane directly into the cabinet through a roof slot or placed on a side loading turntable and taken into the cabinet, which allows for easy blasting all the way round the part. Small micro blast units, incorporating a pencil like blast nozzle, are also available for intricate blasting of turbine blade cooling holes.



Ultrasonic cleaning

Baths, tanks and submersibles



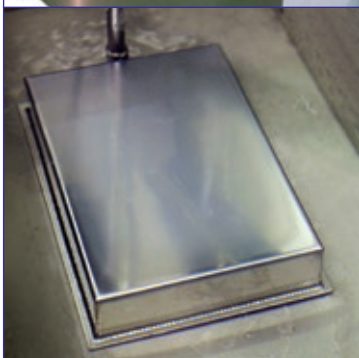
The larger Kerry ultrasonic baths are regularly recommended to aerospace component manufacturers who conduct Non Destructive Testing (NDT) operations. These are used to clean off fluorescent penetrant from 'Tam' panel test pieces. Kerry ultrasonic baths can also be used to thoroughly clean laboratory glassware and remove residue from the sampling components of analytical equipment. The Pulsatron KS ultrasonic tank range incorporates a variety of tank sizes, holding from 21 to 275 litres, for robust quality cleaning in applications such as aerospace MRO. Spray rinse options are available with the Kerry UCR (ultrasonic, clean, rinse) product line.



Kerry KST submersible transducers are designed for applications such as retrofitting to existing cleaning tanks or incorporation into new machines on an OEM basis. All KST transducers are manufactured from 316L stainless steel, with hard chrome plated radiating faces for durability.

KST's also offer the option of Primewave® control, which allows variable or split frequency, switchable anywhere between 25 kHz and 120 kHz, and variable power control.

The CRD 450 (clean, rinse, dry) is a three stage aqueous cleaning system suitable for applications such as PCB defluxing, metal finishing and maintenance cleaning. A manually operated system providing ultrasonic cleaning with heating, immersion rinse weiring to drain, a hand held spray for second rinse (DI optional), and recirculating hot air dry up to a maximum temperature of 100°C.



Safe aqueous cleaning options

The Guyson 'ORBIT' single stage spray washer is available in two standard sizes: the Orbit 800 is the most popular size while the compact Orbit 600 fits into a smaller footprint. These top loading spray washers offer excellent cleaning results, with a motor driven rotating basket carrying the components under the highly effective spray jets. These machines are often used in manufacturing cells and regularly used for degreasing flap actuation gears. Aerospace MRO is another use of the Orbits cleaning power on projects such as cleaning landing gear and brakes. Additionally they can be used for the removal of general dirt and grime from both aluminium and steel aeronautical ground lighting (AGL) castings during maintenance; allowing them to be handled safely whilst being disassembled. If necessary a fully ATEX certified Orbit design is also available for operation in the most hazardous of working environments.

For higher volume component cleaning the Guyson Marr-Line conveyerised wash system provides the very latest in safe aqueous technologies, ideally suitable to incorporate into a modern cellular workflow environment. The Marr-Line range can provide a tailored solution for most washing, rinsing, drying and coating applications. The superb flexibility of the modular build concept allows each system to be configured precisely to suit your specific needs.

Also available for high volume cleaning of smaller parts is the Guyson Allka-Jet 600 rotary basket washer. This provides automated cleaning comprising submerged wash, spray rinse and hot air drying of newly machined components such as aerospace fasteners and turbine blades.



Automated blasting

Shot peening, robotic controlled blasting and tumbleblasting



Guyson can provide a multitude of automated finishing options. Multiblast® automated blast systems with multiple guns are engineered to ensure a high level of process and machine control. This ensures an accurate, consistent and uniform finish to every part. By eliminating the variations inevitable in hand processing, component quality, cost control and productivity can be dramatically increased; such as with Guyson Tumbleblast systems, often used for batch deburring of aerospace fasteners.

The Multiblast RSB is equipped with a single rotary work spindle or table on which the component is loaded by hand or by robot. Whereas the Guyson RXS blast cabinet has an indexing rotating turntable - fitted with revolving work spindles, which index through the process area, presenting the components accurately and for a strictly measured time in front of the blast guns. Both of these systems are used for wide range of aerospace applications, including surface conditioning of turbine blades prior to thermal spraying, glass bead peening for refurbishing turbine compressor blades and peening of precision gears.

Guyson also have several options of robotically controlled blast machine with either the component or the gun being manipulated by the robot. Previously Guyson have experience of building numerous multi-axis robotic blasting machines for shot peening aerospace components, incorporating full media conditioning and reclamation systems.



Precision cleaning

Automated cleaning options include aqueous and solvent

The standard Microclean four stage aqueous cleaning system (heated ultrasonic clean, rinse, rinse, warm air dry) is suitable for a wide range of aero engineering and aero electronics cleaning applications. And the Microclean's modular design means that additional stages can be added to meet a variety of process requirements, such as closed loop high purity deionised water rinsing providing organic and ionic cleanliness superior to MIL standard. Successful Microclean applications include removing polishing compounds from optical glass and plastic lenses, cleaning valve components, removing swarf and machining oil from hydraulic components and cleaning, rinsing and drying turbine blades prior to NDT pentrant testing.

Alternatively the Microsolve Mono and Co-Solvent ultrasonic cleaning systems use HFE (hydrofluoroether) or HFC (hydrofluoro-carbon) solvents, followed by vapour rinsing and freeboard drying to facilitate precision component cleaning. The Co-Solvent process is particularly suitable for heavy duty ultrasonic cleaning. Typical Microsolve applications include precision cleaning of bearings, gyro components, connectors and interconnects, maintenance cleaning of aerospace power generation system components and pneumatic and hydraulic components. And in electronics, flux removal from PCBs, including no-clean and lead-free solder flux residues, and from soldering jigs and fixtures.

Both the Microclean and Microsolve cleaning systems operate most efficiently when fitted with Guyson Autotrans lifting automation, to provide fully automatic operation.



Contacts

UK

Sales, Design and
Manufacturing Centre
Guyson International Ltd.
Snaygill Industrial Estate
Keighley Road, Skipton
North Yorkshire, BD23 2QR
Tel: +44 (0)1756 799911
Fax: +44 (0)1756 790213
email: info@guyson.co.uk
www.guyson.co.uk

France

Sales and Service Centre
Guyson SA
ZAC des Portes de l'Oise
2 rue Henri Becquerel
Bâtiment B7
60230 Chambly, France
Tél: +33 (0)1 30 28 43 16
Fax: +33 (0)1 39 37 87 71
email: contact@guyson.fr
www.guyson.fr

USA

Design and Manufacturing Centre
Guyson Corporation of USA
W.J. Grande Industrial Park
13 Grande Blvd.
Saratoga Springs
NY 12866-9090
Tel: +1 518 587 7894
Fax: +1 518 587 7840
email: info@guyson.com
www.guyson.com

Malaysia

Sales and Service Centre
Guyson SDN BHD
Shoplot 10, G/F Hotel Equatorial
1 Jalan Bukit Jambul
11900 Penang
Tel: +60 46 41 49 95
Fax: +60 46 41 50 03
email: kerrygg@guyson.co.uk

China

Sales and Service Centre
Guyson SDN BHD -
Wuxi Representative Office
28# Building, ZhenXin Road
Xing An, New District
Wuxi, Jiangsu Province
P.R. China
Postal code: 214000
Tel: +86 510 82790120
Fax: +86 510 82790120
email: zzlzhly@guyson.co.uk



FM 38758

OHS 595776

Guyson International



Guyson International Limited is the largest independent manufacturer of blast finishing, spray washing and ultrasonic cleaning equipment in Europe and supplies a worldwide customer base. Guyson offer automated handling solutions, where suitable, including both robot load & unload and also pick & place options.

Comprehensive ranges of automatic and manual blast cabinet systems are available to suit all production situations. Specialist applications include surface treatment of medical implants, shot peening of turbine blades and surface preparation of components such as cutting tools, to improve coating adhesion, prior to PVD coating.

Ultrasonic equipment includes bench top baths for laboratory, medical and light industrial use and ultrasonic cleaning tanks for industrial use. Microsolve systems for precision cleaning in wide range of sectors including electronics, optics, aerospace and defence, as well as multi-stage aqueous ultrasonic systems for specialised cleaning of components such as medical implants, hard disk drives, diamonds, optics etc.

Also available is a range of aqueous spray wash equipment including rotary basket washers, conveyorised tunnel washers and a compact high impact hot aqueous spray washer designed for the workshop. Full product and application information for all equipment is available on the Guyson website.

