

CAMPBELL
machinery

Multiblast[®]

Automated Blast System



GUYSON

where quality comes to the surface

RXS

ROTARY INDEXING SYSTEM

For component

With Guyson MULTIBLAST® automated blast cleaning systems, component surfaces are treated by the impact of media (angular or spherical particles) fired through adjustable air operated blast guns precisely positioned in a sealed chamber. The components are presented to the guns on a purpose built table which can be fitted with special features and dedicated component holding facilities.

A suction or pressure feed media delivery system, media separator and dust extraction system make up a complete free standing installation which is specified to match each application.

Selective or overall blast finishing

The highly versatile RXS MULTIBLAST® rotary indexing table blast cleaning system allows continuous, selective or overall surface treatment or finishing of individual components produced in volume.

Repetitive quality and increased productivity

Designed and engineered to ensure a high level of process and machine control, the RXS ensures an accurate, consistent and uniform finish to every part. By eliminating the inevitable variations in hand processing, component quality, cost control and productivity can be dramatically increased.

Customised specifications

Using pre-engineered and well proven standard parts, assemblies, and many optional features, Guyson RXS machine specifications are configured to match each application and individual customer needs.

Applications

- Surface preparation and pre-treatment of metal, plastic or composite parts to improve coating adhesion or plating
- Cleaning to remove a variety of unwanted deposits
- Light burr or flash removal from metal and thermoset plastic parts
- Cleaning sensitive surfaces without damage
- Cosmetic finishing of metals and the decoration of container glass
- Peening treatments to improve fatigue life and corrosion resistance



Glass decoration on an RXS 1400

A flexible machine for modern manufacturing systems

To facilitate changes in component mix, batch size, finish or speed of throughput, both process conditions and machine settings can be quickly adjusted either manually or by P.L.C.

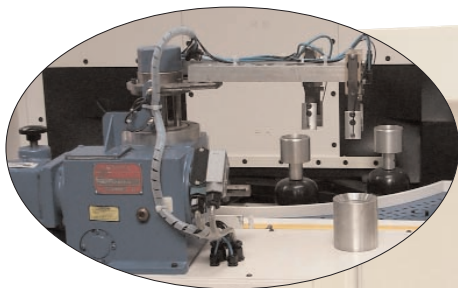
Control and monitoring systems which ensure that process variables remain within pre-set limits can include:-

- Table and spindle speed
- Blast time and index duration
- Air pressure
- Media flow
- Media level
- Media size
- Component load and counting
- Remote media feed and dust disposal facilities
- Dust collection bin level
- Vacuum level
- 'On screen' display monitors
- Hour meter

surface preparation, clean

Auto load/unload of components

Attached to the periphery of the table, load/unload spindles stop at the external workstation in an identical precise position every time. This permits manual load/unload by one operator with full infra-red light guarding or by link up with robots or pick and place mechanisms.



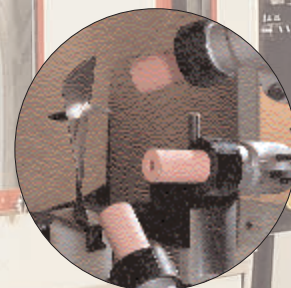
Pick and place loading

Precise Blast Pattern

- Media velocity, flow rates, spray patterns and angles are pre-determined during process evaluation
- By presenting the components to the media stream on rotating spindles, optimum blast coverage is ensured
- Variable direction and speed of spindle can be specified
- Fixed position, oscillating or moving gun options available



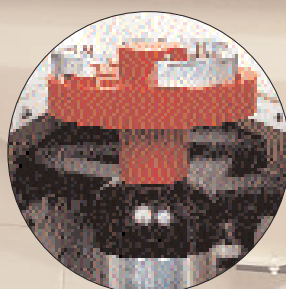
Shot peening turbine blade roots



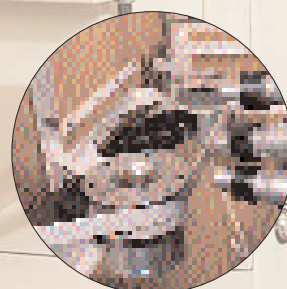
Cosmetic surface treatment



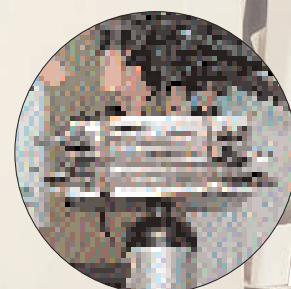
Fully sealed RXS spindle



*RXS 900 with brake shoes
fixtured for blasting*



*RXS 1200 with bolt on
fixture possibilities*



*Removal of deposits from
battery cells*

Durability

Anti abrasion features incorporated into the RXS when hard, sharp media is employed include:-

- A polyurethane coated table and lined hopper and cyclone
- A rubber lined blast chamber
- Sealed spindles
- Boron carbide nozzles
- Rigid polyurethane ducting

Air Wash

Before exit from the blast chamber, components index into a separate chamber where air jets or an air knife remove surplus media. Component washing can be achieved by including a Guyson automated aqueous wash system into the same manufacturing system.



aning and finishing... the solution is **Guyson**



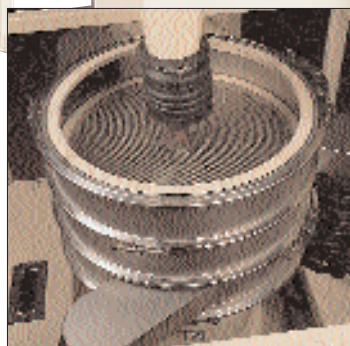
Cyclone, sieve and dust collector



Filtration system



Helicoidal roundness classifier



Sieve separator

Media separation and extraction

The quality of the surface finish produced on components is influenced by the condition of the recirculating media.

All blast media changes its size, weight and shape after repeated impacts on the components. A consistent mix of particles is required to maintain uniform results and therefore each application requires an optimised media separation system.

This is achieved by specifying an appropriate cyclone reclaimator. This allows heavier re-useable media to continuously recirculate to the blast guns whilst removing the under size particles and dust.

Dust filtration and collection

This residual dust laden air is cleaned and exhausted from the system by employing the very latest filter technology which includes cartridges housed in the integrated dust collector unit. The filters are continuously cleaned in operation by reverse flow pulse jets. Blown off dust is deposited in a removeable bin at the base of the dust collector unit.

Special applications

- A vibrating screen classifier can be added to enhance control over particle size when tighter standards of consistency of component surface or cleanliness apply.
- For shot peening, media shape must be controlled by including a precisely engineered roundness classifier.
- When large flows of dense media have to be circulated a bucket elevator is often used as an alternative media delivery system.
- Dual hoppers can be used for two stage blasting with different media.

surface treatment excellence . . .

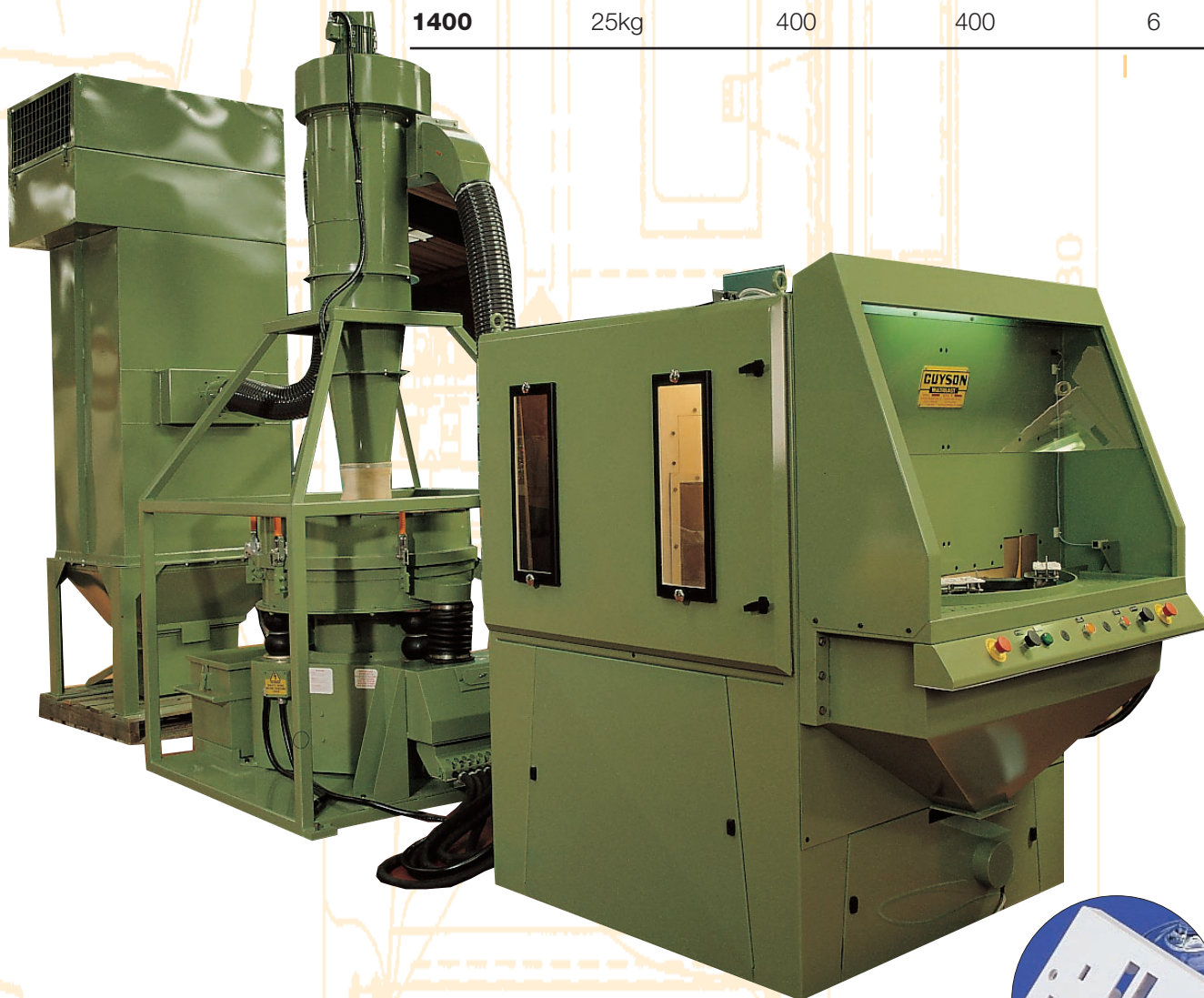
RXS

Optimised Design

The RXS range is available in 3 standard sizes, RXS900, 1200 and 1400.

The model is defined by the component envelope.

| RXS Model | Max Wgt (mm) | Max Dia (mm) | Max Height (mm) | Number of stations |
|-----------|--------------|--------------|-----------------|--------------------|
| 900 | 5kg | 200 | 400 | 6 or 12 |
| 1200 | 20kg | 250 | 300 | 6 |
| 1400 | 25kg | 400 | 400 | 6 |



Operating efficiency

Cycle times as low as one part per 5 seconds are achievable. Simultaneous loading/unloading, operation of blast guns and airwash jets, minimises the 'dead time' in the process cycle, ensuring economical use of air and media with maximum operating efficiency.

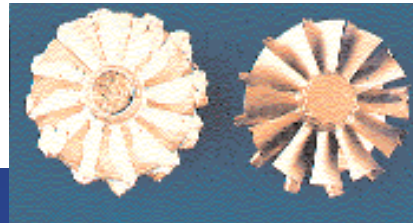


RXS 900 deflashing
thermoset plastic
components

Think solutions... think **Guyson**

Typical components

- Precision castings
- Glass containers
- Automotive components
- Turbo impeller wheels
- Jet engine blades
- Defence equipment
- Carbide tip tools
- Plastic and composite mouldings
- Hand and power tool parts
- Prosthetic implants
- Precision instruments
- Non-ferrous die castings
- Computer parts



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Applications Engineering Expertise

Very experienced and highly proficient project teams are at the disposal of customers for collaboration at every stage. Initial design concepts and machine specifications can be offered at the very earliest point in your program.

This together with unrivaled test, evaluation and machine demonstration facilities ensures that all customers receive a thoroughly professional service from start to finish.

Experience and capability

With over 60 years experience and with ISO 9001 certification, Guyson International is the recognised world leader in the design and manufacture of machine systems for surface engineering.