



we redefine

# Coin Blanking Industry



# We're the UK's leading experts in providing effective and efficient processes, and solutions, for the coin blanking industry.

#### we redefine:

Vibratory Finishing

High Energy Finishing

Consumables

Precision Polishing

Subcontract Services

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#### Why Choose Us?

We're a family run business that pride ourselves on working as a strong, unified team of specialists.

#### We believe in British

Born in the United Kingdom, we are unique in our product design and the manufacture of our specialist machines and consumables.

#### We're here for you

Being based in the heart of the country means we have easy access to all of our clients.

#### We have experience

With five decades of experience and knowledge in the finishing industry, we know what works for you.

#### We provide options

We have an impressive range of media and compounds to choose from, including one of the best polishing compounds in the market. We also provide a wide range of machinery and subcontract services to meet all of your needs.

#### We go the extra mile

We'll tailor our services to your needs, not the other way round. Our service is all about you.



## Mass Finishing for the Coin Blanking Industry

We understand the importance of a high quality surface finish in the coin blanking industry. Contamination of dust or the presence of surface defects produce poor quality coins. The coin blanks must be finished to a high specification before being minted.

Companies within the industry usually implement mass finishing techniques in their processes for the economic advantages, and the consistent results achieved. Manual finishing processes are known to be labour intensive, with the disadvantages of rework, inconsistent results and high costs. Having identified the issues, we offer a wide range of unique solutions that improve current processes, reducing cost and achieving the repeatability and quality desired by our customers. ActOn's finishing equipment and consumables have been well adapted and accepted by global market leaders worldwide.

Process applications include:

- · Cleaning of coin blanks ready for striking
- · Surface finishing before and after plating
- Deburring, cleaning and burnishing before and after the annealing process
- · Descaling post annealing
- Burnishing of silver and gold bars
- Drying to prevent tarnishing of the surface or oxidation

The results are achieved in ActOn's finishing machines using burnishing media and specially formulated compounds.

Depending on the final finish required, the surface finishing stages can be repeated after coins have been stamped.

We understand the importance of achieving the result with negligible weight loss of the component.

Some of the materials we have worked with:

- Gold
- · Silver
- · Copper
- · Stainless steel
- · Brass
- · Aluminium

## ActOn Research and Development

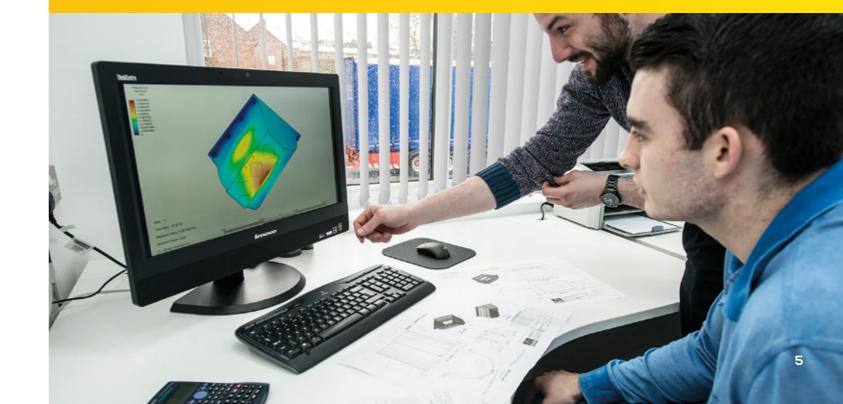
We are continually evolving our processes and machines, making them more effective.

We also have academic connections throughout the United Kingdom and around the world, which help facilitate our Research and Development department, where we house various metrological equipment to ensure that our customers' requirements are met and exceeded

By combining our complete process knowledge with decades of experience, and our all-encompassing range of machinery, we can deliver the most optimum, cost-effective and environmentally friendly finishing solution for your needs.

Our most popular consumables for the coin blanking industry:

- Stainless steel media for burnishing, cleaning and light deburring purposes. This media wears very slowly and has a life of up to 10,000 hours. ActOn's stainless steel media is available in different shapes such as balls, ball cones and steel pins
- Polishing media is ideal for removing oxidation and mass residual deposits and achieving a bright polished finish. This media comes in many shapes and sizes to suit part geometry.
- ActOn's agro-media for a clean polished finish. This product is an excellent moisture absorbent media which also produces of stain-free polish effect, preventing tarnishing or oxidation of the surface
- ActOn pre-treated agro-media has been developed for polishing components in the High Energy finishing machine.
   The result is a high mirror finish in a short time
- P6 powder compound is an ideal product for a polished finish or copper parts when used with polishing media
- LQ9 liquid compound, which is excellent for obtaining a bright polished finish on ferrous and non-ferrous metals. This compound is our bestseller in the coin blanking industry, being used by major manufacturers ground the world























Component	Output Required	Machine Type	Deburring Media	Media Type  Polishing Media	Drying Media	Compou	und Type  Polishing	Typical Process Time
Silver Bar	Polished Finish			0			0	10 mins
Aluminium Medal	Deburring and Mirror Finish		0	0		0	0	120 mins
Copper Medal Blank	Deburring and Bright Finish		0		0	0		60 mins
Gold-Plated Coin Blank	Burnishing	Burnishing		0	0		0	60 mins
				0	0		0	20 mins
Stainless Steel Coin Blank	Burnishing			0			0	60 mins
				0			0	20 mins
Proof Coin	Mirror Finish			0	0		0	15 mins
Nickel Embossed Label	Mirror Finish				0			20 mins
Gold Ingot	Deburring and Mirror Finish		0		0	0		30 mins

#### Bowls

to meet your unique applications.

#### **Key Features**

#### **Key Benefits**

#### **Troughs**

#### **Key Features**

#### **Key Benefits**





#### Duals

#### **Key Features**

#### **Key Benefits**

#### **Driers**

#### **Key Features**

#### **Key Benefits**













# SPU-1 Vibratory Finishing System

A Single Portable Unit ideally suited for small batch works and delicate parts, which can be used as either a batch or a continuous system.

This vibratory finishing system is perfect for deburring, descaling, degreasing, cleaning, smoothing, radiusing, polishing and drying. This is both an excellent and economical finishing option.

# VB10P Vibratory Finishing System

This Vibratory Finishing System has been designed to ensure 100% unload of media and components from the inishing machine, while reducing manual handling and achieving a consistent finish every time.

#### System Benefits and Features

- Portable unit.
- Built in compound recirculation system.
- Water/compound can be filled from the side of the machine.
- Available in 3 phase and 1 phase.

- Compact design
- British built high-quality product
- Efficient in operation
- Quiet in operation
- Operator friendly controls

#### **VB1S Vibratory Bowl** Control System Designed with automatic separation system to separate parts from media at the end of finishing process. Components are then discharged to the next sequence of the process to be dried. VBD1 Drier Components are loaded in the drier via a side loading chute. Design includes heating elements provided to heat the drying media (maizorb) which acts as an absorbent and removes any moisture from the parts. **Parts Collection Tray** Independent recirculation system and integrated water filtration. The tank maximum capacity is 30L. Storage Area

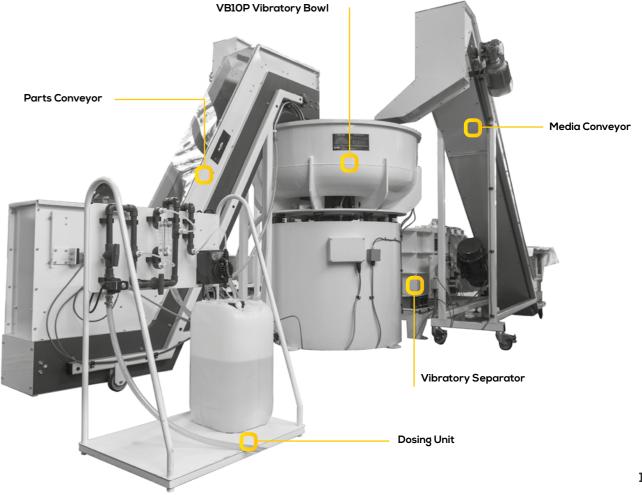
#### **System Description**

This vibratory system allows the operator to set up the process parameters and easily control the process. Once the process starts, a set batch of parts are loaded into the vibratory finishing bowl via a conveyor.

At the end of the process the bowl's pneumatic media door opens allowing the parts and media to be discharged in a storage hopper. This stage ensures 100% unload of media and parts from the finishing machine. After the parts and media

have been unload the pneumatic door closes to allow a new finishing process to begin.

The system also includes a vibratory separator which enables the separation of parts from media. The undersized media falls through a separation grid and is filtered from the system, while the rest of the media returns into the vibratory bowl through a conveyor. The finsihed components are transferred from the vibratory separator to a conveyor and discharged in the packing area.



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#### **High Energy Finishing System**

Built with the latest high energy technology, the drive mechanism is designed to produce high g-forces resulting in a high polishing efficiency. The machine consists of 3 or 4 barrels mounted on the periphery of the turret. The turret rotates at high speeds which sets a centrifugal force within the barrel 5-25 times the normal gravity. The barrels and turret are counter rotating which delivers the highest polishing efficiency. The result of this orbital motion is that the centrifugal force applied increases the weight of the abrasive media and this then slides against the components, producing a superior result in a short space of time. Often, these results cannot be achieved using vibratory finishing machines. The high energy finishing machines are widely used in the industry to produce a mirror finish on components.

#### **Key Benefits**

- ✓ High polishing efficiency
- ✓ Great for descaling, deburring and mirror finishing
- Minimum loss of material
- ✓ Gentle action on parts
- ✓ Greater control of the process
- ✓ No need for fixturing or tooling
- ✓ Fast processing times
- ✓ No impingement
- Easy to maintain

#### **Key Features**

- ✓ Control through HMI or control panel
- Media recirculation
- Media separation system
- Compound and water dosing
- Unbalanced weight detection
- Pressure release valves
- Removable barrels and liners Variable speed
- Operator friendly





#### **CHE240 Finishing System**

The system is PLC controlled, ensuring measurements of media, parts and compounds are precise and accurate. The system delivers consistent results in short cycle times. The HMI allows the operator to choose the desired recipe and have access to the maintenance schedules.

	CHE240				
Batch Type	Multiple batch system (3 barrels)				
<b>Load Capacity</b>	25kg - 75kg of blanks*				
Processing Time	Ranges from 15 to 45 minutes*				
Processing Time	Ranges ITOH 13 to 43 Minutes				

\*Above figures are indicative and may vary based on blank type and process application.

#### **Key Features**

- ✓ Automatic loading of parts, media and compounds (semi automated and) manual versions also available)
- PLC and HMI controls
- Recipe controlled
- Media recirculation system
- ✓ Ability to process blanks of different sizes in different barrels without mix-up
- ✓ Faster process times than traditional high energy disc machines
- ✓ No restriction in weight, thickness or size of blanks
- ✓ Parts are transferred to a drying system and then onto a turntable for
- Can be tailored to suit a wide range of process applications

Please refer to our product brochures for the technical specifications of the machines

#### Storage hopper

With load cells that controls the weight of parts and media being dispensed into the barrel.



#### **CHE240**

Finishing Machine.

Media and parts

Conveyor

To accurately dispense the liquid, media and parts into the

barrels based on the recipe

Swivel tube

into the storage hopper.

storage hopper With weight control.

#### Media recirculation system

Transports the media back into the storage hopper post the process.

#### Work platform

#### Separation system

To separate parts and media at the end of the process. This system also has a drain for all the liquid to be emptied.

#### **B Series Finishing System**

This system was designed for descaling, burnishing and drying of coin blanks. The system is automated, ensuring minimum operator intervention and guaranteeing consistent results.

#### **Key Benefits**

- ✓ Ensures high quality descaling and burnishing of coin blanks
- Minimum loss of material
- ✓ Drier can be used for drying and /or fine polishing using agro media
- ✓ Ability to handle a wide range of parts with different shapes and sizes
- ✓ The system can work for continuous batch production
- Very quiet in operation
- ✓ Clean process
- Easy to operate
- Energy efficient
- British high quality product
- $\checkmark\,$  Durable machine due to design, good quality materials and workmanship knowledge

#### **Key Features**

- $\,\checkmark\,$  B series machines are designed to suit this heavy duty application with a powerful drive system and special springs
- ✓ Special rubber lining to assist the movement of the parts during the process can be incorporated (B Series machine)
- ✓ Flyweights set for optimum action in bowl
- ✓ Drier design includes an access hatch over the separation screen of the drier to allow operator to view parts
- ✓ Dosing unit recommended to control the compound flow rate dosed into the bowl. This ensures parts are clean and give an extended life of media and machine work bowl
- The system can be further automated to improve the efficiency

Please refer to our product brochures for the technical specifications of the machines.

#### Click here to request a Quotation today!

#### **Centrifugal Disc Finishing System**

This ActOn Disc Finishing system is unique in design and meets the highest standards required by the mint industry. The design allows continuous output: while the finished batch of coin blanks are separated from media and discharged, a new batch is being processed in the disc finishing machine.

The process is fully automated and controlled from the point of coin blanks being processed to the discharge of the parts.

#### **Key Benefits**

- Equipments configuration results in seamless and controlled processing
- ✓ Operator intervention is minimal
- ✓ Measured throughput to avoid excessive loading & controlled process
- ✓ Repeatable process via recipe control
- Customised to user requirements
- Very quiet in operation
- Clean process
- Easy to operate
- Low maintenance
- ✓ Energy efficient
- British high quality product



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Man x Machine x  $\underline{\text{Media}} = M^3$ 

#### Consumables

Over the years, we have been at the forefront of the industry, developing a range of specially formulated consumables approved by the coin blanking industry.

By working closely with our customers, our Engineers have understood the numerous challenges faced in the industry and developed suitable consumables.

Choosing the right consumables is crucial in achieving your desired finish, and we endeavour to help you to select the correct media and compounds for your components.

Please refer to our Consumables brochure for more information.



#### **Liquid Compounds**



#### Powders & Pastes

materials. These products are suitable in freshwater operations.

#### Plastic Media



#### Ceramic Media

media is suitable for various deburring, radiusing and polishing processes, and is specially formulated to go hand-in-hand with ActOn's compounds.

#### Special Media

Our special media includes steel media; a separation ball media that keeps flat parts separate, ensuring they don't stick together



#### **Pre-treated Media**

Agro Media





#### Value Added Service

On top of our state-of-the-art machinery and media, we also supply a range of support and training services.

#### Learn more on how you'll benefit:

#### Subcontract Services

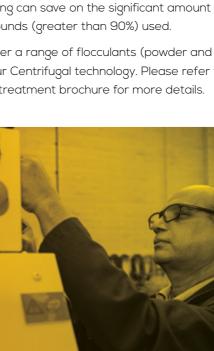
#### High Energy and Vibratory Finishing Services

Our factory is well equipped with High Energy (HE) and Vibratory machines, which are designed and manufactured by our Engineers. The HE machines provide a speedy finishing solution, as well as a high quality finish to the parts, eliminating any need of fixturing and preventing their impingement. Along with the HE machines we also have Vibrota finishing equipment, which processes parts of variable sizes and batch quantities.



#### **Shot Blasting and Peening Services**

We offer shot blasting service from our Coventry facility to our customers in the Architectural, Automotive, Defence, Design, Food Manufacturing, Health and Safety, Marine, Steel Manufacturing and Profiling industries. Our service can achieve the desired Sa standards to ensure that the part's surface is cleaned to the specification. our applications include descaling, removing corrosion, mill scale, paint or rust, achieving a smooth finish, deflashing, polishing, strengthen the metal and more.



#### **Precision Polishing**

In order to provide you with complete surface finishing solutions, we offer a precision polishing service for components from various industry sectors. In combination with our barrelling capability, you'll benefit in terms of cost, delivery and quality. Our applications include removal of manufacturing defects on femurs and aerofoils, which are inherent in the casting and forging process.

#### Inspection

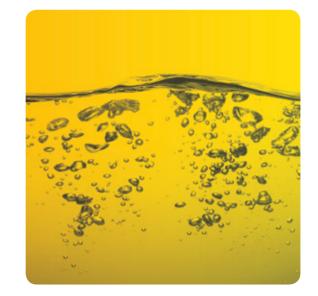
Our trained inspectors ensure every component is inspected to the required specification prior to delivery. The inspections can include visual, dimensional and surface finish measurements. Our document controls ensure that all inspections are recorded for traceability purposes.

#### **Waste Water Treatment**

During the finishing operation, the effluent can be polluted with oil, media and metal fines. It is critical that the effluent must be treated before going to drain, or if it is being recycled back into the system. Each area or district has its own discharge consent, hence the effluent must be analysed against this.

The effluent can be recycled, however there are certain applications where it is not possible. In that case, the treated effluent can be transferred directly to the drain. Recycling can save on the significant amount of water and compounds (greater than 90%) used.

We offer a range of flocculants (powder and liquid) coupled with our Centrifugal technology. Please refer to our waste water treatment brochure for more details.



#### After-sales, Training and Installation

We hire a number of highly trained staff, including engineers, who are on-call for all of your after-sales requirements. From installation and training, to maintenance and prompt professional advice, our finishing specialists are here for you every step of the way.





#### **What Our Customers Say**

"It's always been a joy to deal with the team, who are always very thorough and informed."

"Not only do we now have high quality machines and compounds, we also have access to an excellent after-sales service."

"Everyone I've come into contact with has been very responsive and organised."

### Quality You Can See

We pride ourselves on our excellence, and over the years we have successfully demonstrated an ongoing compliance with ISO quality and environmental standards.

For ISO, we currently hold:









We're proud members of the 'Made in Britain' campaign.

"The bitterness of poor quality remains long after the sweetness of low price is forgotten."

Benjamin Franklin





#### we redefine

ActOn Finishing Limited
213 Torrington Avenue
Tile Hill, Coventry, CV4 9HN.
United Kingdom.

+44 (0) 24 7646 6914

enquiries@acton-finishing.co.uk

www.acton-finishing.co.uk