

DLyte[®] A New Concept of Polishing



ActOn Finishing is authorised distributor of the DLyte® machine, a dry electropolishing system designed to achieve high quality finishing for machined, sintered and casting parts, obtaining a mirror finish result in a short period of time.

we redefine:

- Vibratory Finishing
- High Energy Finishing
- Shot Blasting
- Consumables
- Precision Polishing
- Subcontract Services

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.

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About DLyte® Technology

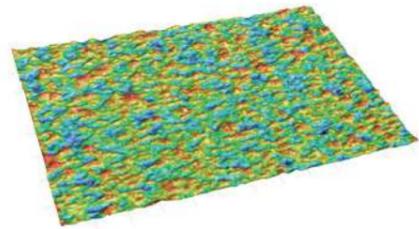
ActOn Finishing is authorised distributor of the DLyte® technology. This technology is developed and manufactured by GPAINNOVA, Spain, for grinding and polishing metals by ion transport using free solid bodies. DLyte® is revolutionising the dry electropolishing technology as it doesn't use any liquid as electrolyte.

Unlike traditional polishing, DLyte® Technology differentiates itself by its ability to preserve the initial shapes, even the cutting edges, and penetrate into all dead zones. It creates a homogeneous polishing across the surface, without grinding patterns and has the ability to process complex geometries without leaving micro-scratches on the surface. DLyte® Technology respects the tolerances and delivers brilliant mirror-like finishes, with one step, and with controlled costs.

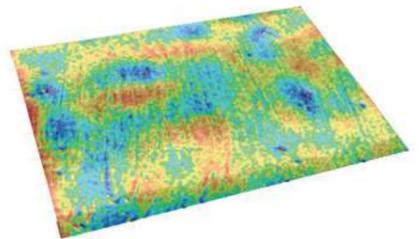


Technical Report

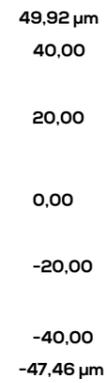
Clutch before finish



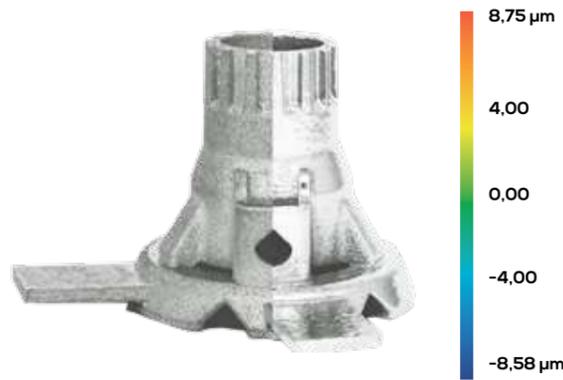
Clutch after finish



Clutch before finish



Clutch after finish



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DLyte® Applications

Healthcare

Implants, Instruments, Prosthetic Parts, Hearing Aid, Needle

Industrial

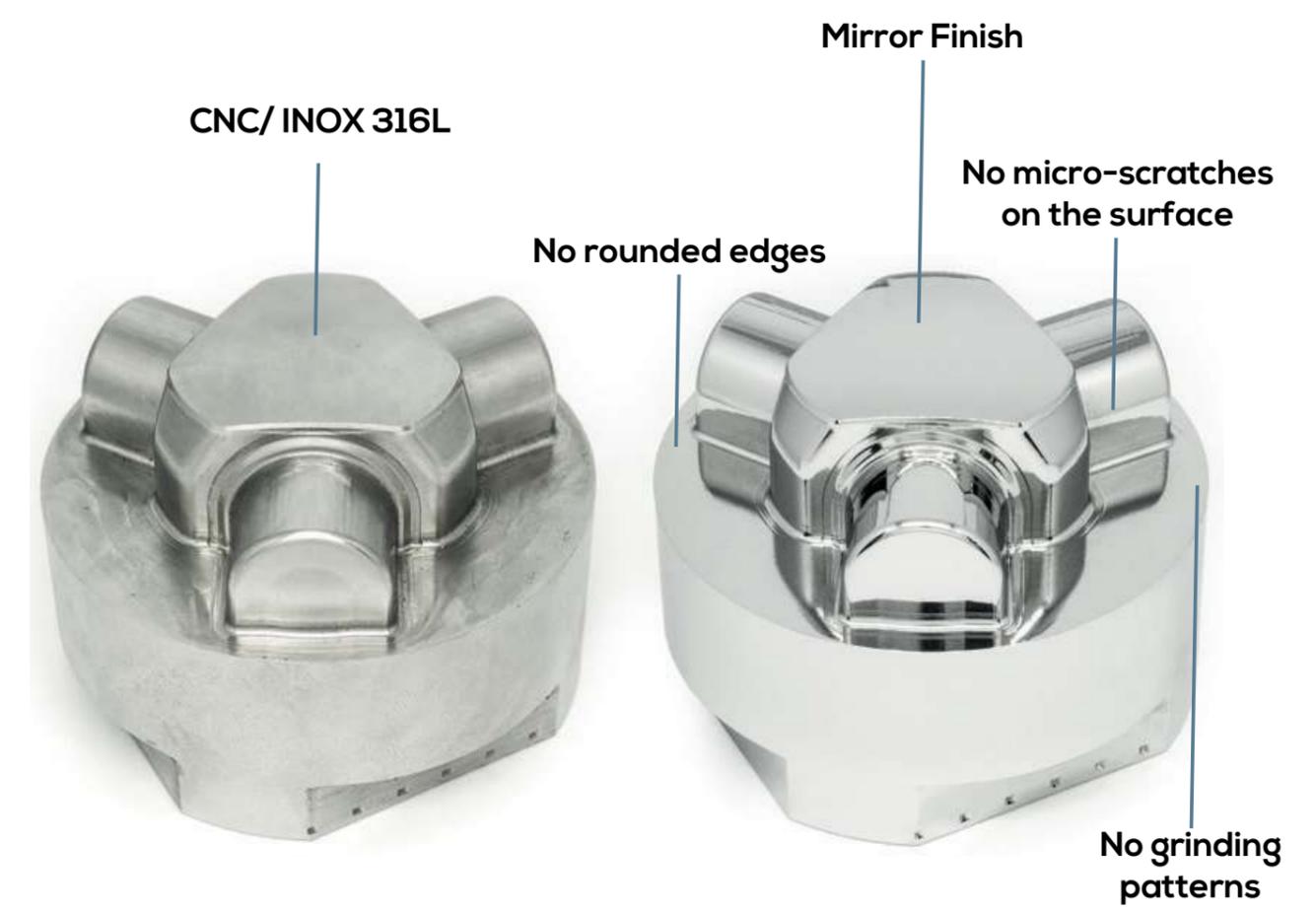
Moulds, Dies, Industrial Precision Parts, Cutting Tools, Engine Parts, Watch Case

Aerospace

Blisks, Stators, Blades, Manifolds, Brackets, Guide Vanes, Bearings, Gears

Automotive

Impellers, Shafts, Gears, Bearings, Joint balls, Fuel Injectors, Brake parts, Luxury Inserts



Surface Roughness Before:
Ra 0.692 µm | Rz 3.626 µm

Surface Roughness After:
Ra 0.125 µm | Rz 0.843 µm

Dlyte® for Healthcare Industry

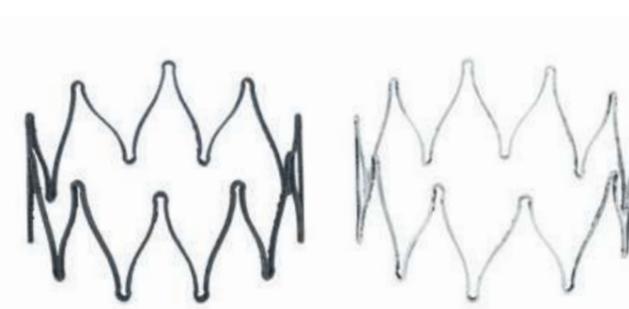
Dlyte® preserves the initial shape without rounding edges, achieving a perfect fitting. The process does not leave grinding patterns on the surface, delivering brilliant mirror-like finishes with predictable costs. The ability to process complex geometries without leaving micro-scratches on the surface, while respecting the tolerances.



Craneal Implant
SINTERING / TITANIUM



Interbody Spinal
SINTERING / TITANIUM



Coronary Stent
LASER CUT / NITINOL



Osteosynthesis Plate
MILLING / TITANIUM



No micro-scratches on the surface
No rounded edges

Mirror finish
No grinding patterns (improving fatigue resistance)
Homogeneous polishing (preserve the tolerances)

Before the finishing process

After the finishing process



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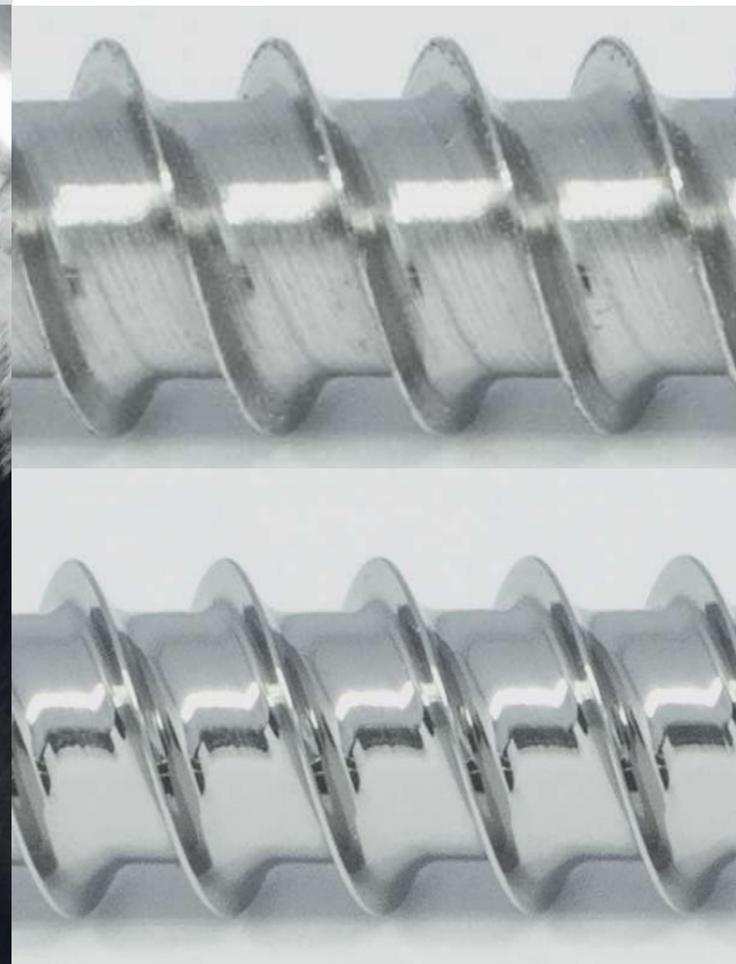
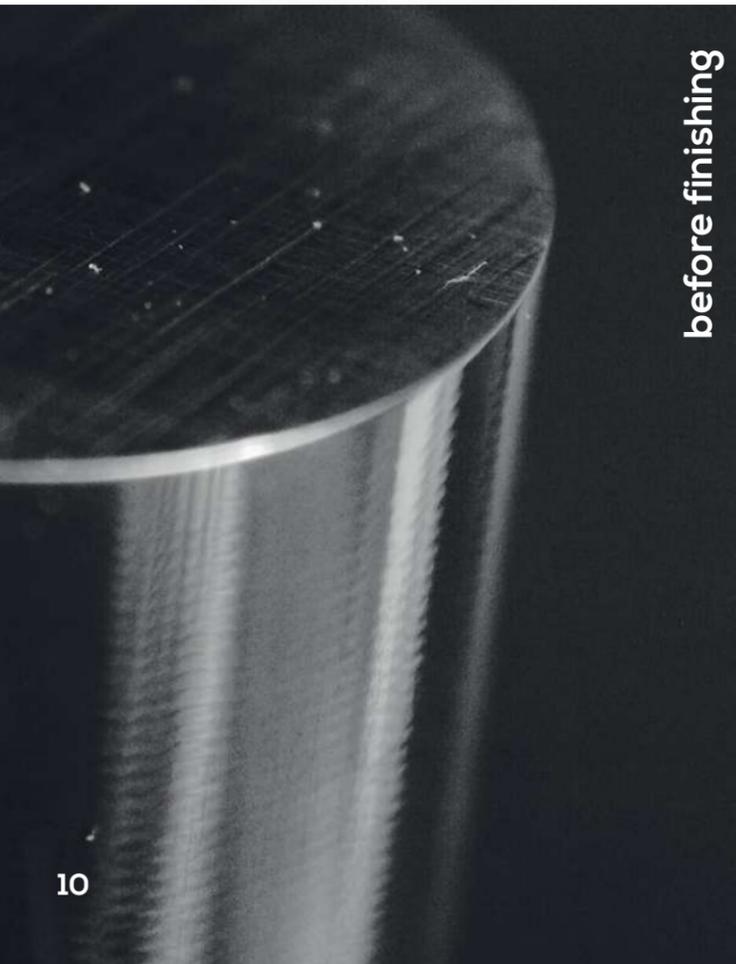
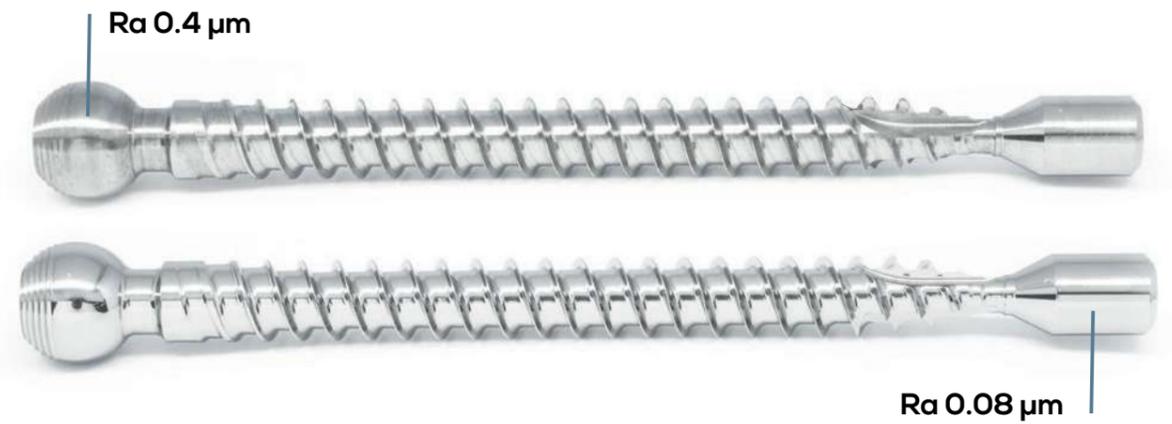
Dlyte® for Tool Industry

The process achieves homogeneous finishing along the piece, giving values of final roughness below 0.1 µm (Ra). DLyte® offers high quality finishing increasing the wear resistance and prolonging its lifetime



Dlyte® for Finishing Titanium Parts

DLyte® is able to grind and polish Titanium alloys for the Aerospace, Healthcare and Dental industries. This new titanium application allows deburring and homogeneous polishing without changing the properties of the material, while maintaining the geometry of the piece.



DLyte® Machine

The DLyte® machine achieves high quality finishing for machined, sintered and casting parts, obtaining a mirror finish result. The polishing action reaches every corner of the piece, so it can process inner cavities which can not be accessed mechanically.

DLyte® offers a large range of solutions to meet the industry requirements according to finishing needs, production quantities or piece dimensions. The entire product range allows automation of the finishing process ensuring high scalability and performance.

Key Benefits:

- Fully automatic polishing to a mirror finish in one step.
- Homogeneous polishing across the entire surface of the piece is the main advantage compared to mechanical polishing.
- Respect of tolerances and preservation of initial shape, even cutting edges.
- Traceable industrial process.
- Increases resistance to corrosion.
- Achieves homogeneous texture results across the surface.
- No contamination on the surface and no traces of hydrogen on the surface.
- Achieves negative surface skewness (rsk) which increases the surface bearing contact area (allowing uniform lubricant film distribution).
- Controlled costs and predictable lead times.
- Doesn't generate grinding texture patterns, improving resistance to part wear and fracture resistance, improving the bearing ratio, an improving fatigue resistance.
- Reproducibility and homogeneity.
- The ability to process complex geometries without programming (especially important for AM).
- Ra under 0,09 micrometers (For additive manufacturing parts).
- Allows for easy processing of channels and cavities.



DLyte 100

Finishing Solution for a Wide Range of Materials

DLyte® systems use a polishing media which consists of solid particles (electrolyte) of different sizes. Thanks to the wide variety of electrolytes, DLyte® provides a solution to the most common metals and alloys in the industry, such as Cobalt Chrome, Stainless Steel, Carbon Steel, Nickel Alloys, Copper Alloys, Titanium and Nitinol



Inox 316L / Sintering



HSS 1.3343 / Milling



Copper / Casting



Brass / Casting



Titanium / Sintering



Titanium / Milling



Cobalt Chrome / Casting



Cobalt Chrome / Sintering



Cobalt Chrome / Milling

Click [here](#) to request a quotation today!

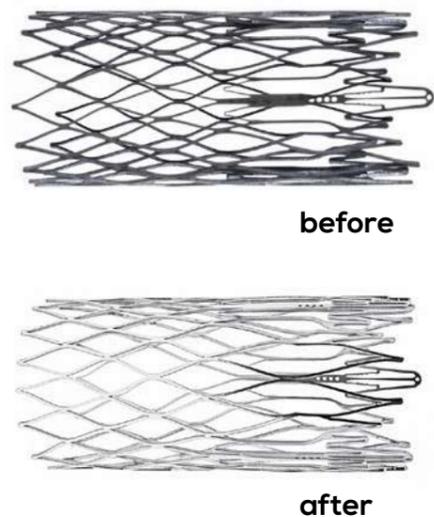
DLyte® Desktop PRO

All the features from a DLyte machine, available in an ultra-compact system. This equipment has been designed to allow any manufacturer, workshop, workroom and SMEs, who would require a cost-effective solution for metal surface finishing, to use the dry electropolishing technology.

How it works?

DLyte Desktop PRO works by combining the electrical flow created by the high precision rectifier with the movement of the pieces through the electropolishing media. This results in an ion exchange, removing material only from the peaks of roughness. The process does not round edges and can access internal corners that are not easily accessed mechanically.

<p>Step 1 The parts are clamped onto the holder</p>	<p>Step 2 The holder is introduced into the machine</p>	<p>Step 3 The program is selected.</p>	<p>Step 4 Surface finishing treatment is performed.</p>
			



Reduce the number of steps in your polishing process

With DLyte Desktop PRO, metal components are homogenously finished, up to 10 times faster than traditional equipment. DLyte increases productivity and allows any technician to focus in high-value activities while the equipment is finishing the parts.



Key Benefits and Features

- Consistent surface finishing results every time.
- Combines the performance of DryLyte technology with the ease of a plug-and-play system, allowing a higher quality surface finishing in comparison with manual polishing.
- Affordable finishing solution.
- Pre-set settings and opt-in advanced controls allow you to finish metal parts at the press of a button.
- The DLyte Desktop does not require special installation.
- It operates with a standard household electrical plug.
- Deduced loading and unloading times due to the holder fixation system with easy pressure and automatic locking system.
- Includes an advanced and intuitive interface.
- Space-saving as it can be operated on top of a table of 465 mm x 465 mm.
- Smooth and silent in operation.
- The automation of surface finishing with DLyte Desktop PRO protects the technician from the exposure to the chemical agents at work.
- Consumables are safe and clean, without hazards of chemical liquids waste or dust during the process.
- Easy to maintain
- Achieves an Ra under 0,01 micrometers
- CE certificate.

DLyte® Desktop PRO Technical Specifications

Machine Dimensions (in mm/ inch)	450 x 521 x 471 / 17.7 x 20.5 x 18.5
Machine Weight	43 kg
Capacity / cycle	1 component
Maximum dimension of component (in mm/ inch)	60 x 80 / 2.3 x 3.1
Component weight	0.5 kg
Power	1.7 kW
Voltage	220-240 VAC Optional transformer kit 110 V/230 V
Frequency	50 - 60 Hz
Short-circuit breaking capacity (LCS)	0.3 kA
Grounding connection	TN System
Protection index	IP 20 (polishing module) IP 22 (electrical cabinets)
Sound pressure level	< 70 dB (A)

Software Packages

	Model	Description
Standard Package	CoCr Group	Software to treat Cobalt Chrome materials.
	Stainless Steel Group	Software to treat Stainless Steel materials.
	Titanium Group	Software to treat Titanium Group materials.
Optionals	Copper Group	Software to treat Copper Group materials.
	Nickel Group	Software to treat Nickel Group materials.
	Aluminium Group	Software to treat Aluminium Group materials.
	Steel Group	Software to treat Steel Group materials.
	Full software package (all materials)	Software to treat all Group materials.

Click [here](#) to request a quotation today!



DLyte® Compact Range

The DLyte® range includes 4 finishing machines designed for treating:

- Very small and fragile parts; high-value, delicate pieces which cannot be damaged during the process.
- High-precision parts with very tight dimensional tolerances.
- Very complex pieces with many contours and shapes.
- Parts with high-demanding finishing requirements.
- Components made out of extremely tough & abrasion-resistant materials.
- Rotative and aerodynamic parts.
- Prototyping and short production series.
- Additive Manufactured parts



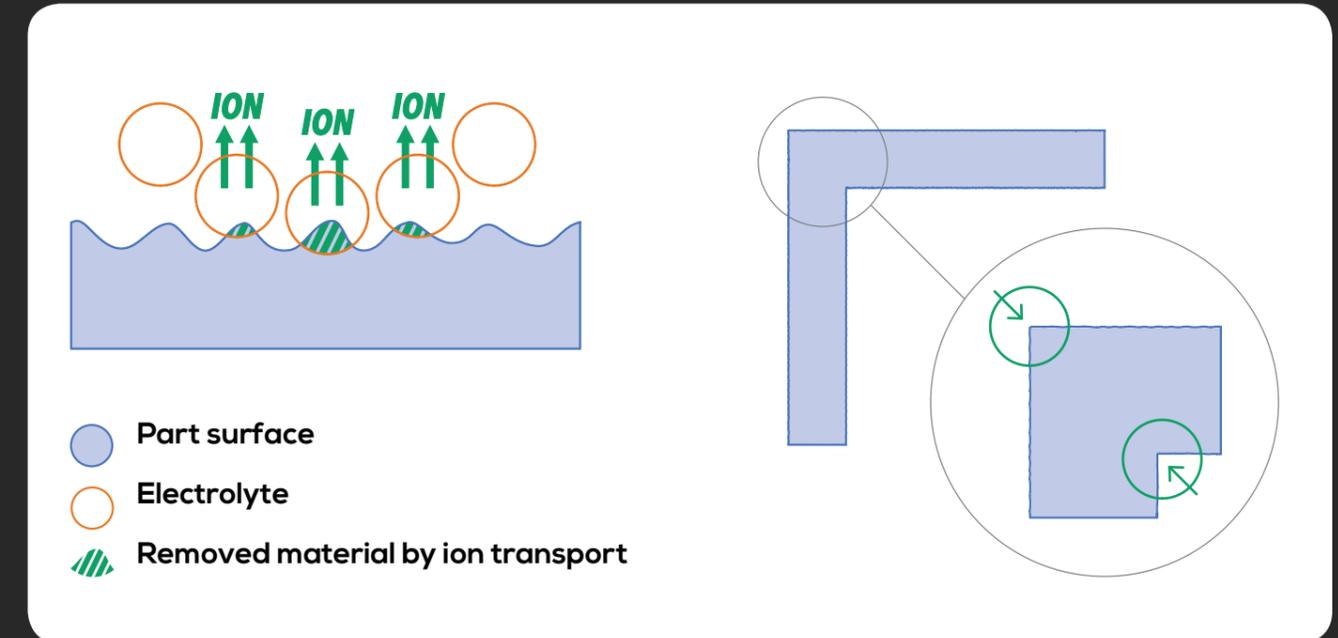
Key Features

- Maximum size per piece permitted for each model: 180 Ø x 80mm
- Programmable cycle time.
- Automatic parameter adjustment.
- Automatic media conductivity adjustment
- Variable motors speed & movement.
- Digital interface.
- Customizable settings.
- Process data can be loaded/ unloaded onto external USB storage drive.
- Ergonomic loading and unloading of holder.
- Quick and easy change of media.
- Anti-vibratory support with wheels for easy handling.
- Easy and low maintenance costs.
- Very low noise emissions thanks to the acoustic insulation system.
- No dust emission.
- Very low gas emissions.
- CE certificate.

How it works?

DLyte® is a polishing system for metal parts that require high performance or superior finishes. A revolutionary dry electropolishing that does not use any type of liquid.

The process extracts the material only from the high peaks of the roughness, it does not round the edges and penetrates the internal cavities of the piece that cannot be accessed mechanically”.



The work-pieces are clamped in specially designed holding systems in the machines. The holder of DLyte® is dragged with a combination of planetary movement, vertical back-and-forth motion & rotation on its vertical axis inside the drum containing the Dry electrolyte media. The machine includes a high-performance cathode inside the perimeter of the drum allowing uniform electrical fields to achieve homogeneous results across the surface. The automatic media conductivity adjustment system consists of a conductivity tester and a high precision pump which adjusts the media conductivity automatically.

The combination of precise hardware and software, intelligent electronic parameter monitoring and optimal media flow control ensures the process optimization and electrolyte media performance stability ensuring a constant process quality along the media life. The powerful software includes a database where piece specific process parameters can easily be stored and managed.

DLyte® Compact Technical Specifications

Model	DLyte® 1	DLyte® 10	DLyte® 100
Capacity (maximum volume in mm)	75Ø x 50	120Ø x 50	180Ø x 80
Component weight (kg)	1.5	2.5	5
Machine Dimensions in mm/ inch	510 x 1150 x 690 20.1 x 45.3 x 27.2	820 x 1280 x 680 32.3 x 50.4 x 26.7	950 x 1410 x 730 37.4 x 55.5 x 28.7
Support Dimensions in mm/ inch	505 x 743 x 702 19.8 x 29.2 x 27.6	820 x 680 x 680 32.3 x 26.7 x 26.7	950 x 700 x 740 37.4 x 27.5 x 29.1
Machine Weight	96 kg	173.5 kg	217.5 kg
Support Weight	47 kg	87 kg	100 kg
Power	2 kW	3 kW	5 kW
Voltage	220-240 V	220-240 V	220-240 V
Air Pressure	4-5 bar	4-5 bar	4-5 bar

Note:

Sizes indicated above are standard. Custom sizes can be manufactured to suit specific applications.

Dimensions are subject to change due to design improvements.

Click [here](#) to contact us for a Free Finishing Trial today!



DLyte® 1



DLyte® 10



DLyte® 100

DLyte® PRO Series

The DLyte® PRO Series has been designed to include the largest compact dry electropolishing machines for industrial applications. This series includes a PRO and a PRO Carbide range.

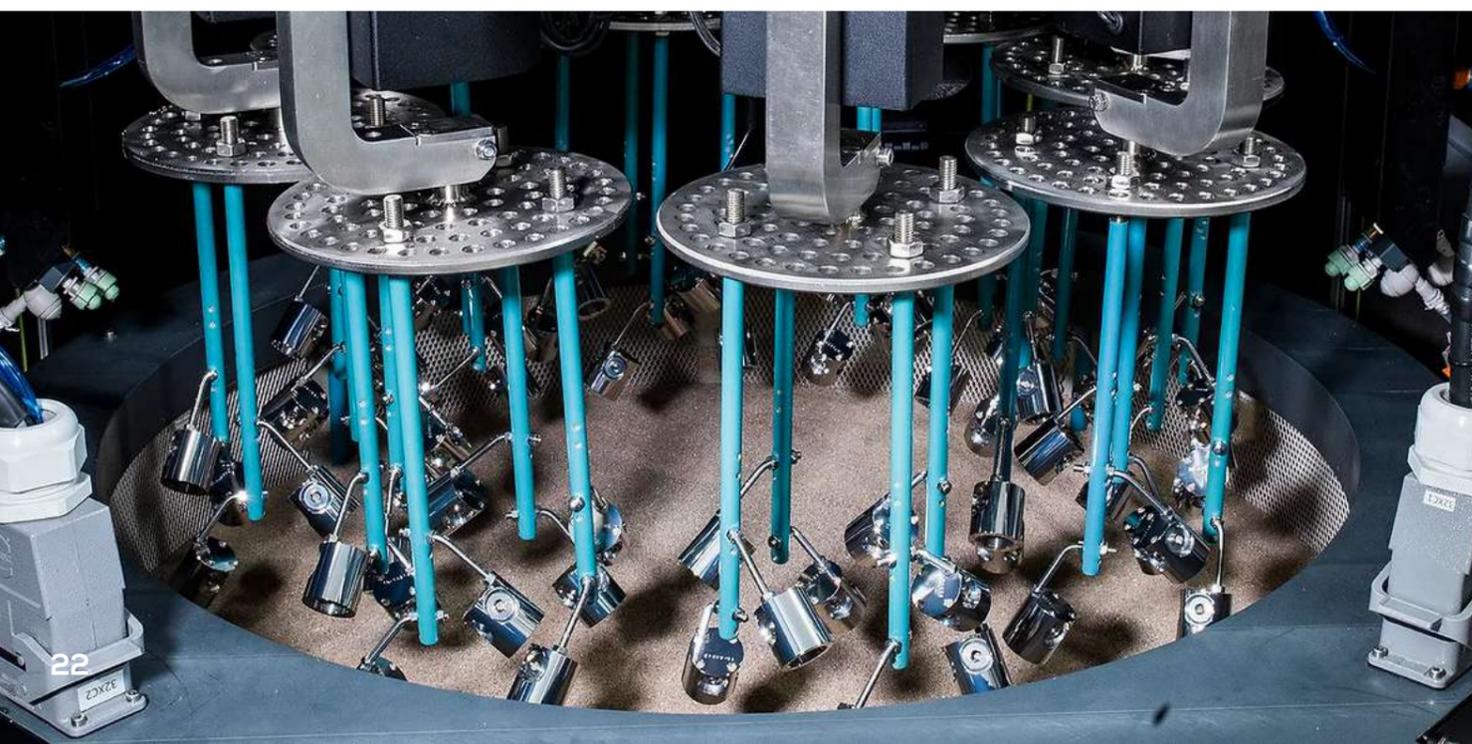
- DLyte® PRO provides a solution to materials such as steel, cobalt-chrome, titanium, copper-based, nickel-based and aluminium alloys.
- DLyte® PRO Carbide advanced PLC based electronics allows processing of carbides and a wide range of materials from low to high frequency. In addition, it controls the holder rotation's speed and direction, to precisely apply movements on each piece of the batch, ensuring homogeneous results.

The main advantage of this range of machines is that the electrolyte's lifespan is based on metal extraction, as it is able to calculate the remaining media lifespan of the electrolyte based on material removal. Thanks to the independent conductivity and temperature probes, it offers readings to the automatic electrolyte conditioning system to optimize performance and its usable life.



Key Features

- Exterior design is more compact in comparison with other models in the series, thus reducing the footprint.
- New design includes doorway opening on the back, allowing easier maintenance operation, which now can be done by one operator.
- Lightning that informs of finishing process status.
- Reinforced pulley bridge to hold components with more weight, and to facilitate the use of longer processing cycles.
- Clamping system with sensor for extra security and to ensure the holder is properly clamped.
- The applied voltage on the conductivity probe can be adjusted between 12 to 48V to improve accuracy of readings for different electrolyte media.
- PLC controlled.
- Lifespan of the electrolytes is calculated by real consumption.
- USB connector to download process parameters and upload process recipes.
- Includes alarm and warnings system.
- Mixing program that stabilizes media humidity.



DLyte® 100 PRO Technical Specifications

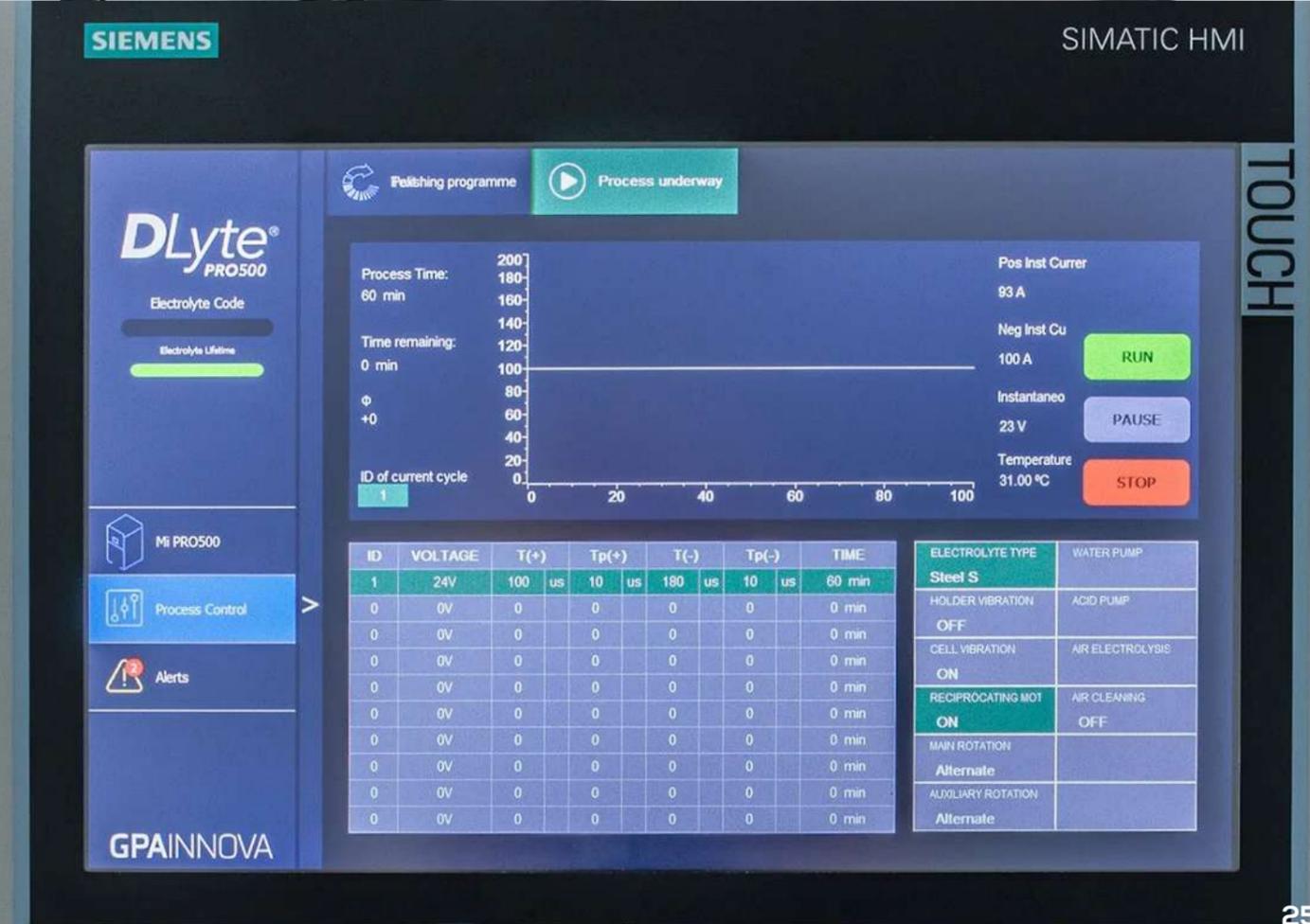
Model	Capacity (max. volume in mm)	Component weight (kg)	Machine Dimensions in mm/ inch	Support Dimensions in mm/ inch	Power	Voltage	Air Pressure
DLyte® 100 PRO	180Ø x 80	5	950 x 1320 x 889 37.4 x 52 x 35	950 x 786 x 710 37.4 x 31 x 28	5 kW	230 V	4-5 bar
DLyte® 100 PRO Carbide	180Ø x 80	5	950 x 1320 x 880 37.4 x 52 x 34.6	950 x 790 x 800 37.4 x 31.1 x 231.5	5 kW	230 V	4-5 bar

DLyte® 500 PRO Technical Specifications

Model	DLyte® 500PRO	DLyte® 500 PRO Carbide
Electrolyte capacity	250 l	250 l
Holder & part area	Ø500 x 540 mm (x1) Ø200 x 540 mm (x8)	Ø500 x 540 mm (x1) Ø200 x 540 mm (x8)
Work part area	Up to Ø500 x 250 mm (x1) Up to Ø200 x 200 mm (x8)	Up to Ø500 x 250 mm (x1) Up to Ø200 x 200 mm (x8)
Weight	50 kg (parts + holder) (x1) 20 kg (parts + holder) (x8)	50 kg (parts + holder) (x1) 20 kg (parts + holder) (x8)
Machine Dimensions in mm/ inch	1,300 x 2,770 x 1,380 51.2 x 109 x 54.3	1,300 x 2,770 x 1,380 51.2 x 109 x 54.3
Machine Weight (kg)	1600	1600
Power	25 kW	25 kW
Voltage	400 V	400 V
Air Pressure	6-7 bar	6-7 bar

Sizes indicated above are standard. Custom sizes can be manufactured to suit specific applications

Dimensions are subject to change due to design improvements.



DLyte® eBlast

Electro Blasting Surface Finishing

The DLyte® eBlast uses the electro blasting technology. The process involves pressurised solid-electrolyte particles propelled by a non-conductive liquid media which is applied to component surfaces for various cleaning or finishing effects.



The DLyte® eBlast improves the surface finish and achieves a mirror finish on components with complex geometries.

Key Benefits

- Perfect for surface finishing parts with intricate shapes.
- Large and heavy components can be processed, without the need of motion.
- No marks and pitting on the surface of the parts, as the liquid forms a protective layer on the surface.
- Even components with holes, slots and inner channels can be surface finished.
- As there are no vibrations or mechanical forces used during the process, the DLyte® eBlast can be used for delicate and fragile parts.
- Achieves an Ra under 0,01 micrometers in a short time.
- Includes the benefits of the DryLyte technology.
- Offers a clean, non-hazardous and easy waste management process.

Click [here](#) to request a quotation today!

How it works?

Electro blasting uses a jet of fluid, made out of a non-conductive liquid and free solid polymer particles, to remove roughness from the metal surfaces. As particles contact the surface selectively on roughness peaks, only those peaks get electrochemically eroded, producing an overall polishing effect.

The equipment can also surface finish automatically in two different ways:

- Via the collaborative robot it processes the required areas. This feature is useful for complex, large and heavy pieces.
- For multiple small components, the drum can be used to mass finish these without any fixturing.



DLyte® eBlast Technical Specifications

Model	DLyte® eBlast
Machine dimensions in mm/ inch	2040 x 1210 x 2130 80.3 x 47.3 x 83.8
Window dimensions in mm/ inch	1450 x 600 57 x 23.6
Approx machine weight (kg)	1000
Electrolyte capacity	70 l
Component volume in mm/ inch	1000 x 500 x 500 39.4 x 19.7 x 19.7
Component Weight (kg)	200
Power	7.78 kW
Voltage	230 V
Max air pressure	5 bar
Max air consumption	300 l / min

Sizes indicated above are standard. Custom sizes can be manufactured to suit specific applications

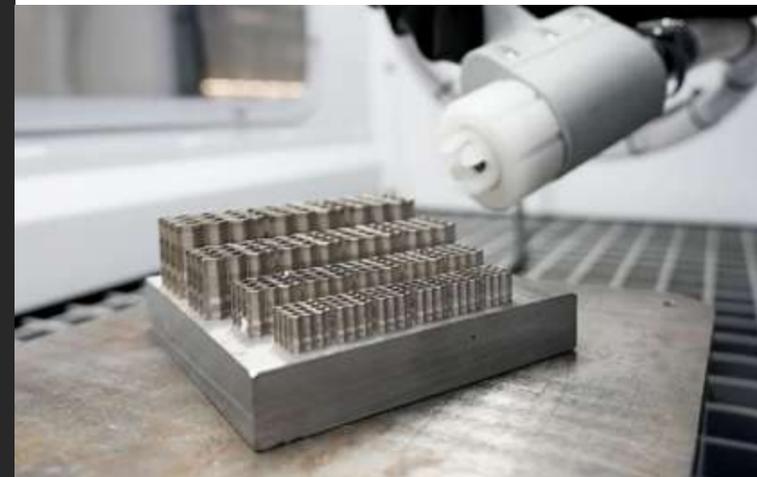
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Finishing Applications

Molds

Via the eBlast technology you can: mirror finish, achieve a smooth finish and surface finish to your specifications the molds. This machine can process from small to large and heavy molds; and parts with cavities, slots or difficult to reach areas.

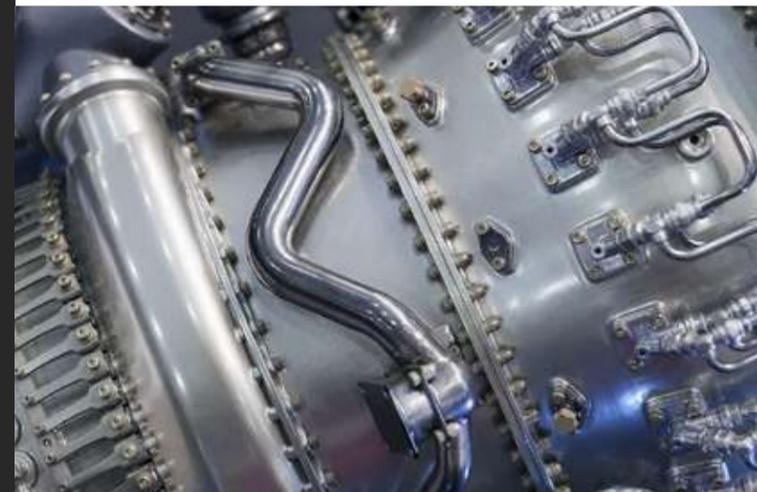


Welded Parts

Parts get a chrome-like finish without high costs and environmental disadvantages. Components are naturally passivated, resistance to corrosion improves, and the material layers are not stressed or disturbed.

Cavities & Inner Channels

Delicate and fragile parts can be finished without being harmed as the process does not use vibration nor strong mechanical forces. As the media stream has low pressure, pieces can be electrically connected without any fixturing.



Complex Geometries

Because the media stream is focused towards the targeted area from a very short distance and the surface is protected from pitting, a homogenous finish is achieved on components with complex geometries. Moreover straight inner channels, with open angles & a minimum diameter of 20 mm can be effectively polished.

we manufacture



Bowls

Each of our Bowls are simple to operate, highly efficient, and manufactured in classic designs and sizes to meet your unique applications.



Troughs

We offer Troughs in many different sizes and an infinite choice of length and width combinations, making them one of our most versatile. These are particularly useful for larger components.



Duals

The orbital Dual finisher works to both deburr and dry in one single unit. This is both an excellent and economical finishing option.



Dryers

Our unique, elliptical-shaped Vibratory bowl drying machines are compact in size, and simple to operate. The design provides the flexibility to use it as an effective 1 lap drying process or a multi lap process. We also offer centrifugal dryers, conveyorised ovens and rotary dryers.



Wheel Polisher

Suitable for achieving a highly polished finish on wheels with different sizes (up to 610 mm), the AWP188 machine has been designed to be simple to operate and to produce excellent results. The wheel polisher is great for grinding, smoothing and polishing processes.



Centrifugal High Energy

Engineered with the latest technology, the drive mechanism is designed to produce high g-forces, resulting in shorter process times. This technology can be used for both wet and dry processes.



Centrifugal Disc Finishing

Centrifugal Disc finishing machines have been designed to be reliable and easy to operate. The spinning motion of the disc machine is given by the disc situated at the bottom of an open barrel. The rotating disc makes the media, compound and parts to move in a rolling motion, resulting in effective finishing process in the shortest time.



Wheel Blasting Systems

At ActOn we now offer a range of Wheel Blast Systems to help you achieve the surface finish you need. We can cater to all your application requirements including descaling, removal of corrosion or rust, paint stripping, de-flashing, achieving a smooth finish, shot peening, polishing and surface preparation prior to coating.



Shot Blasting Cabinets

We offer a range of Shot Blast Systems to help our customers achieve the surface finish they need every time. Whether you require to descale, remove corrosion, mill scale, paint or rust, achieve a smooth finish, deflash, polish or strengthen the metal we will offer you full support every step of the way.



Waste Water Treatment

During the finishing operation, the effluent can be polluted with oil, media and metal fines. Our customers trust us to help select a waste water treatment system that complies with the industry's growing regulations. Once processed, the effluent is treated in the ActOn centrifuge system before being discharged to the drain or recycled.

Subcontract Service

On top of our state-of-the-art machinery and media, we also supply a range of support & training services. Moreover, we'll tailor our services & products to your needs, not the other way around. Our finishing service is all about you.

We suit our Finishing Technology and Subcontract Services to cover your needs. From a proved surface finishing technology we will adapt it according to your requirement. Just [contact us](#). We will do the rest.

Custom project development:



Don't just think about it.
It's now time to **ActOn** it.



CHEF, CLM, CDF, Shot Blasting & Vibratory Finishing Subcontract



Inspection Services



Installation, Training, Maintenance Services



Equipment Refurbishment & Spare Parts Service

What Our Customers Say

“Professional, knowledgable, on-time, good value and friendly. You couldn’t want for more. ActOn are always the first place on our list for part finishing.”

Samuel Nottage-McNeice, MAVEN Technology

“ActOn were quick to develop a solution for the shell cleaning system. The disc finishing machine has improved our throughput significantly and we are pleased with the quality of machine that they have manufactured and installed. We look forward to working with ActOn on future collaborative projects.”

Henry Illsley (Shell Process Engineer), Rolls Royce Bristol

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. We’re also an approved supplier for many of our industries, including medical and aerospace.

For ISO, we currently hold:



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

Benjamin Franklin



we redefine

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