DLyte®

The New Concept of Polishing

The only automated system that improves
the results of hand polishing

The new concept of polishing

DLyte is a technological solution that simplifies and standardizes the post-process of metal parts, improving the finishing results obtained with traditional polishing systems.
DLyte Healthcare series are new patented Machines based on patented Drylyte technology for surface finishing of metal alloys for the medical device industry. Provides a solution to the most common healthcare metal alloys.

The applications for DLyte finishing technology range from grinding, rounding and deburring to surface smoothing and high gloss polishing of implants, needles, stents, medical devices and components of medical equipment which require ultra-clean surfaces.

DLyte equipment automatizes surface finishing of metal alloys for the medical sector improving the quality with cost reduction.

BETTER RESULTS THAN CURRENT PROCESSES

BIOCOMPATIBLE POLISHING PROCESS

INCREASES RESISTANCE TO CORROSION

Precise, safe and long-lasting implants

DLyte provides fast, cost-effective high quality surface finishing with consistent results ensuring the performance requirements of the medical device industry.

DLyte offers a high quality finishing for Cobalt Chrome, Stainless Steel, Nitinol and Titanium parts.

How it works

Step 1
The parts are fixed on the holder

Step 2
The holder is introduced in the machine

Step 3
Select the program

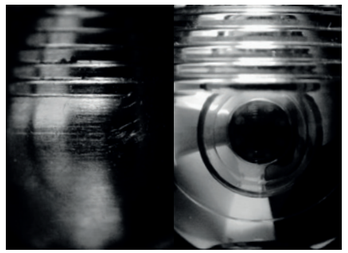
Step 4
Average of 50-60 minutes time cycle

Before DLyte

60 minutes cycle time

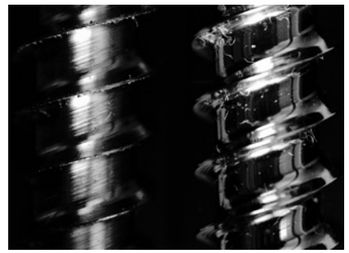
After DLyte

NON ABRASIVE POLISHING



DLyte is the first non abrasive surface finishing system able to reduce substantially the roughness. Being a non abrasive process allows to reduce the rougness keeping the initial shapes and respecting the tolerances.

RESPECT THE TOLERANCES AND INITIAL SHAPES

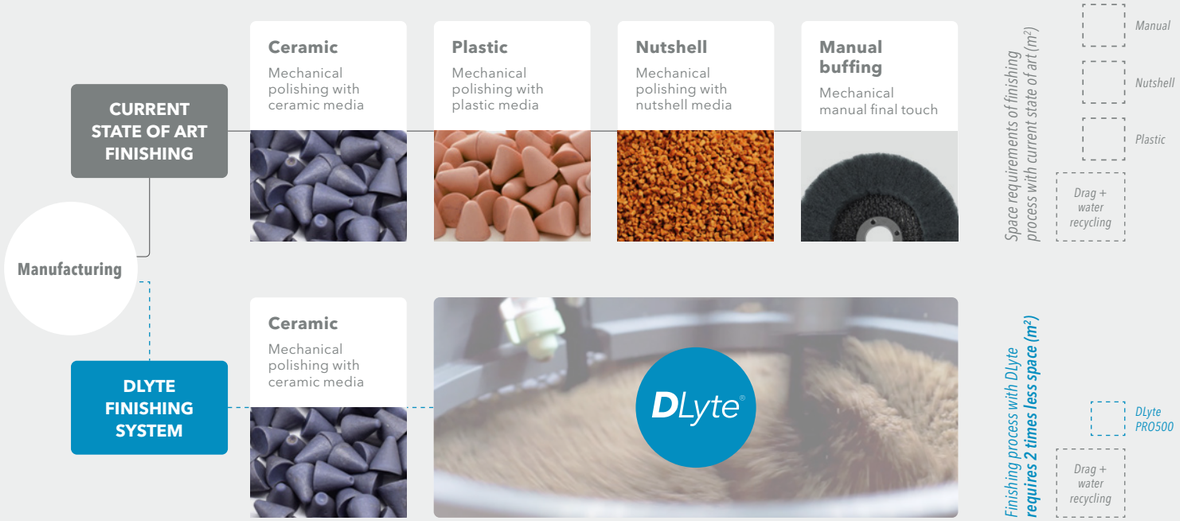


DLyte is especially effective finishing parts with sharp edges, ensuring the radius preservation and homogeneous result across the surface. The polishing action reaches every corner of the piece, so it can process inner cavities which can not be accessed mechanically. DLyte allows polishing of casting, sintered and milling parts.

MIRROR FINISHING IN ONE STEP

DLyte delivers fully automated polishing to a mirror finish in one step where mechanical surface finishing requires several steps and manual buffing and liquid electropolishing generally reduces surface roughness readings of a non-electropolished surface by only 50%.

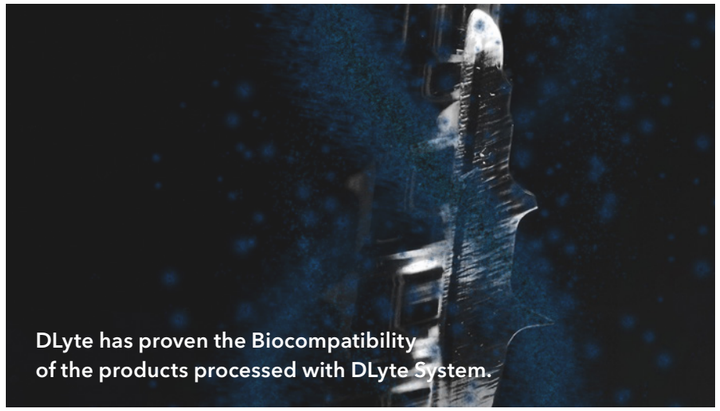
Comparation surface finishing process for machining implant



Proved biocompatibility

The Medical device sectors require clinically proven processes and products which guarantee their compliance with the most demanding safety regulations.

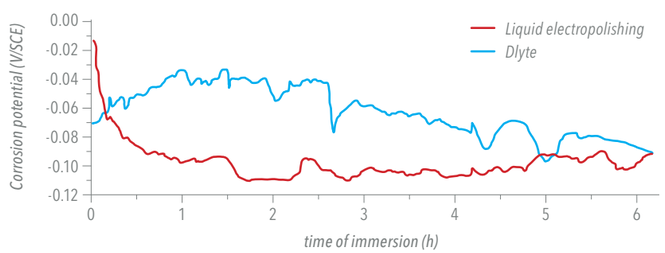
The manufacturer must ensure that the devices meet all appropriate requirements and in particular perform a risk/ benefit analysis and evaluate the biocompatibility and toxicity of the materials used.



Corrosion resistance

Corrosion is one of the main factors reducing the lifespan of implanted parts. The corrosion resistance of a piece of equipment is dependent not only on the selection of the most suitable alloy but also upon the correct treatment of the material. Many applications require a surface treatment to be performed after polishing to comply with the corrosion resistance requirements.

DLyte is the unique system able to remove substantially roughness, improve the corrosion resistance of the metal pieces reducing at the same time the number of processes required in the manufacturing process. **DLyte achieves better corrosion resistance than liquid electropolishing.**



"DLyte achieves better corrosion resistance than liquid electropolishing".

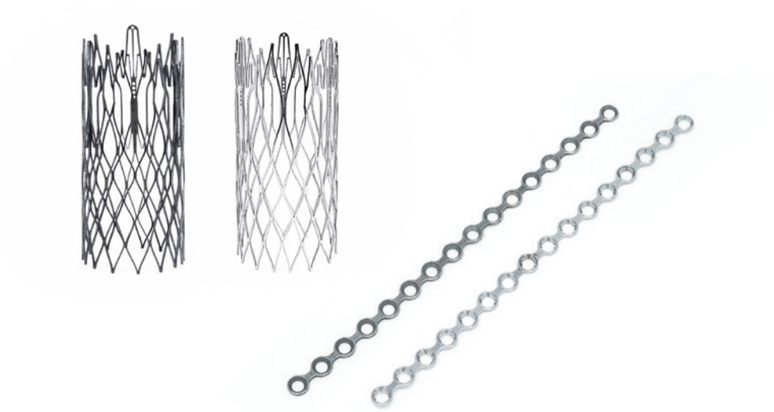
Efficiency, practical and clean process

Clean, non-toxic, simple waste management, DLyte reduces the polishing time, and the toxicity of the current method. Simple and intuitive handling, without any programming required.

Fragile parts finishing

Small medical devices like stents or needles require high quality surface finishing with the disadvantage of requiring a non-aggressive process to avoid damages caused by mechanical energy. DLyte is suitable for these applications as is an electro-chemical process.

Compared with the liquid electropolishing DLyte is more controllable and works efficiently at micro and macroscopic level.



Additive manufacturing implants

DLyte is also suitable for metal additive manufacturing implants performing superior results than existing surface finishing technologies.

"DLyte performs at least two times better surface quality than the next-best alternative between the 7 most relevant post-processing technologies".

Easy waste management and Low waste and water consumption

Most abrasive finishing processes such as grinding, deburring or polishing are wet processes. Water and other chemical agents are the carriers for resultant removal of media and metal fines. The resultant process water requires a closed-up system to recycle the water and a waste treatment machine to compress the solid waste.
Liquid electropolishing installations require removal of electrolyte sludge regularly and careful handling and adherence to health and safety regulations. Disposal of used liquid electrolyte and sludge is usually handled by specialized services to ensure compliance with environmental regulations.

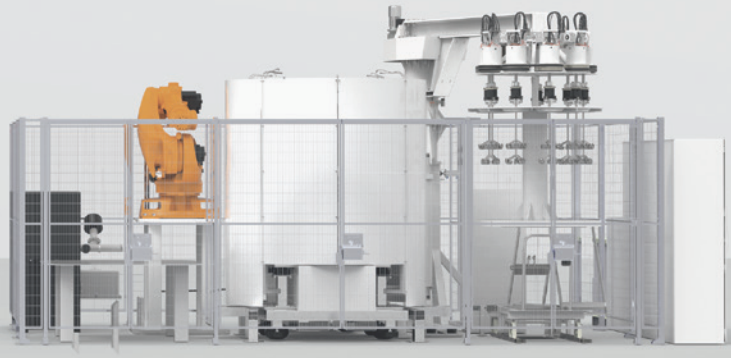
DLyte system does not require closed-up system to recycle water and sludge waste treatment machinery with the corresponding space, labor, water and environmental license costs savings. The disposal of the dry electrolyte is handled by Standard services.

From small to large productions

The wide range of equipment, accessories and media of DLyte meet the broad spectrum of applications, materials and company sizes of the medical device industry.

Compact Series

PRO Series



Modular Solution

All DLyte machines incorporate a package of added services, you can also expand these services

- Trainning and Consulting
- Waranty Extension Package
- Full Service Package
- Software Updates

Electrolyte Medias

DLyte offers a high-quality finishing for medical device industry thanks to the wide variety of dry electrolyte medias.

DLyte performs superior results for all types of implants, needles, stents, medical devices and components of medical equipment which require ultra-clean surfaces.

DLyte1

6 litres

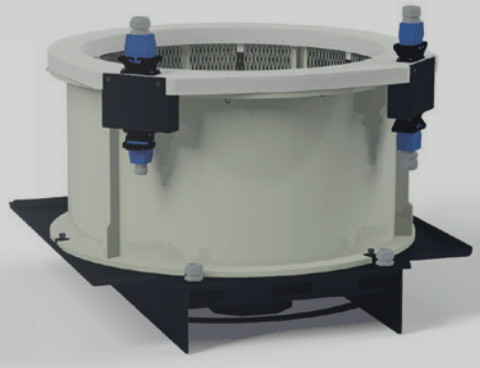
DLyte10

9 litres

DLyte100

16 litres

DLyte PRO500



260 litres

GPAINNOVA C/ Caracas, 13-15, Nau 6 | 08030 Barcelona
Phone +34 931 256 536 | info@gpainnova.com | www.dlyte.es | DryLyte® TECHNOLOGY | CE