



METAPLAS IONON.  
We offer surface protection  
around the world.

**METAPLAS IONON**





## The company

METAPLAS IONON has many years of experience in PVD surface coating technology and plasma-supported heat treatment technology. The company gives customer confidence in both areas due to its high levels of expertise;



METAPLAS IONON is one of the world's leading equipment manufacturers and has great experience through operating its own subcontract surface treatment service centre. METAPLAS IONON's heat treatment systems stand out because of their excellent economical efficiency and extreme reliability. The equipment is fully automated so that programmed treatment cycles guarantee consistently high quality with the simplest operation.

Through continuous research and development, METAPLAS IONON guarantees a technologically high standard which is consistently passed on to customers. The company does not only stand out because of its technological advantage; the name METAPLAS IONON stands for reliable systems quality all over the world. Highly-qualified staff and on-going training courses are the basis for this success – rounded off with an extensive quality assurance system with ISO 9000 certification.

Whether PVD or plasma heat treatment technology is required at METAPLAS IONON the customer receives everything from one source – from competent advice, planning and training right through to tailor-made, high technology systems. At all times "value for the customer" is at the forefront. Environmental protection is assured because METAPLAS IONON technology is always friendly to its surroundings.







## The technologies

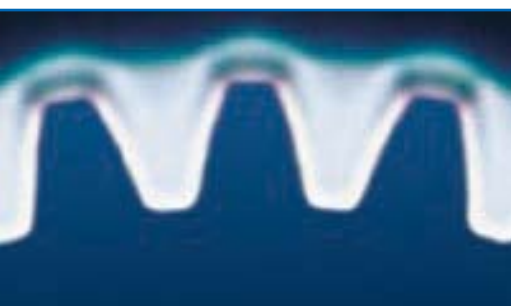
With its modern, extremely environment-friendly process, METAPLAS IONON offers economically efficient solutions tailored to individual requirements for component properties and surfaces.

The IONIT®, IONIT OX® and MAXIT® processes all developed and successfully marketed by METAPLAS IONON have proven themselves in practice all over the world through their outstanding features.

The IONIT® process by METAPLAS IONON is a plasma nitriding and plasma nitro carburising process for any alloyed steel, cast iron, sintered and special metals. With IONIT®, reproducible layers are created in comparatively short treatment cycles using a wide temperature range. A nitrided layer is produced with low distortion, excellent physical properties, great accuracy and low operating costs. The process stands out because of its high profitability, very good environment compatability and flexible operating opportunities for volume and single workpiece treatment.

The IONIT OX® process by METAPLAS IONON is a combination of gas nitriding, gas nitro carburising, plasma activating and oxidising. In addition to excellent corrosion protection and pronounced improvements in wear protection, IONIT OX® surfaces offer a great improvement in mechanical properties. Components treated with IONIT OX® show an outstanding consistency in corrosion resistance. The process is industrially proven to give cost effective and consistent processing whether applied to high volume or single workpiece operations

The MAXIT® process by METAPLAS IONON is a PVD surface coating process which offers a number of operational advantages combined with very good environmental compatability. Various materials can be coated with TiN, TiCN, AlTiN, TiZrN, CrN and W-C:H. Consistent high wear resistance properties together with low friction values are guaranteed. In addition the low tendency for the surface to stick and weld gives materials treated with MAXIT® many operational advantages in a wide area of different applications. The core properties of components are not normally affected due to the relatively low processing temperatures.





## PROCESS

Innovative process for a wide application spectrum.

### IONIT®

High level of process profitability

Even, reproducible layers

Combined ductility and high layer hardness

### IONIT OX®

Outstanding corrosion protection

Improved friction and sliding behaviour

Highest level of environment compatibility

### MAXIT®

Wide variety of different layers

High level of wear protection, low friction values

High level of environment compatibility





## The systems technology

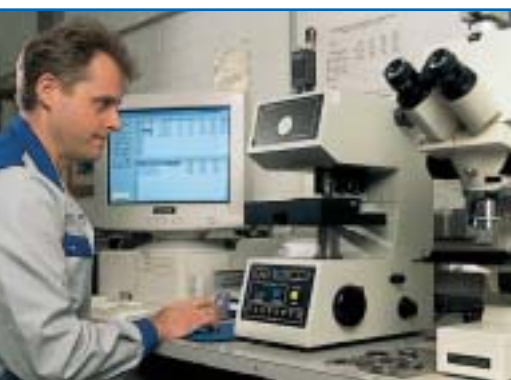
METAPLAS IONON is an experienced company for solving specific customer problems related to plasma-PVD surface coating and plasma-supported heat treatment technologies.

Through constant development in system design and the implementation of new, innovative ideas, we consistently pass on these advantages in cost reduction and technological improvements to our customers. The combination of cutting edge technology with expert advice and reliable service offers you the guaranteed solution for your current and future technological problems.

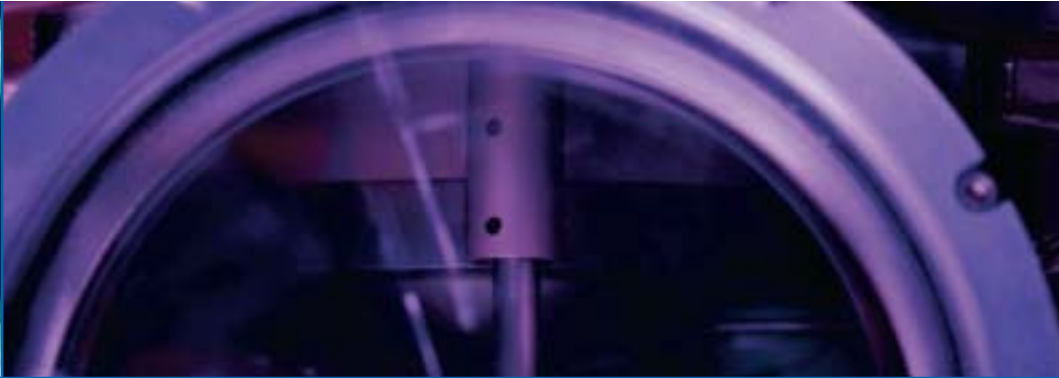
Whether you want to increase your production facility or begin a new project – METAPLAS IONON has the proven technology and can offer you the best solution. Consulting, planning and conception, from a single batch unit right up to complete integrated production lines, training courses and seminars – METAPLAS IONON offers you everything from one source. Furthermore, METAPLAS IONON offers qualified engineering for complex production systems.

In order to meet our customers' various demands IONIT® and IONIT OX® systems are offered as Lift-off bell, Top loaded or Horizontal furnaces. Depending on the required production targets we supply single, tandem or multi-systems to meet the highest volume outputs. With the MAXIT® system METAPLAS IONON offers system engineering tailored to the customer's wishes.

Moreover, METAPLAS IONON offers qualified engineering for complex production systems. The manufacturing range includes complete systems families – from the "mini compact system" for research and laboratory operations to large industrial systems suitable for more extensive surface coating of high volume and large parts.







## ADVANTAGES

**Innovative and cost effective plant technology.**

Higher degree of plant automation

Capable of being integrated into existing production lines

Wide range of systems variability

Easy-to-use systems technology

Automated production is possible

Complete systems from one source

Consulting, planning and service all over the world

Research and development

Engineering for complex process systems





## The service sector

As a supplier of sub-contracted surface treatments, METAPLAS IONON offers a fast and reliable round the clock service. For particularly urgent orders, METAPLAS IONON operates an Express Service

The surface treatments IONIT®, IONIT OX® and MAXIT®, together with conventional heat treatment processes such as gas nitriding, hardening, degassing, tempering etc., are offered as a reliable and professional service by METAPLAS IONON.

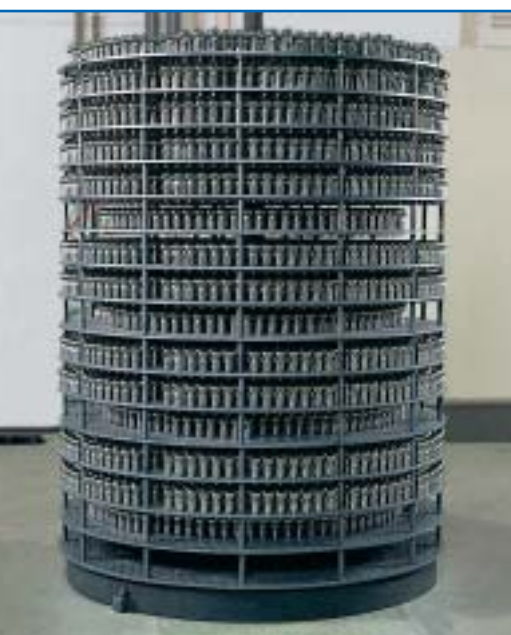
METAPLAS IONON offers its customers the complete surface processing service. From cleaning, deburring and vapour-blasting the components right through to high gloss polishing after surface treatment, a whole spectrum of processing options are offered to the user.

Our customer orientated consulting guarantees the correct layers for all types of different applications. Reducing costs, increasing productivity and optimising operational safety give our customers a considerable advantage over their competitors.

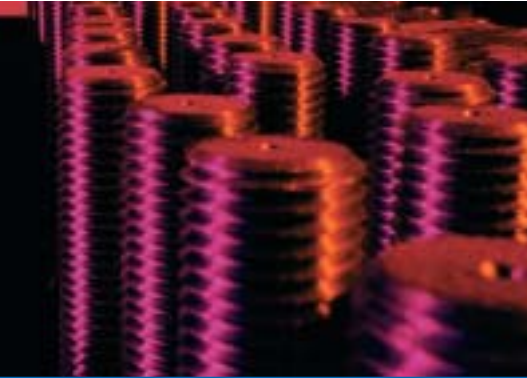
Our quality system offers the complete range of the latest control and analysis methods with production and quality assurance conforming to the accepted ISO 9000 standards. We are also certified for the highest levels of quality and production requirements within the automotive and aeronautical engineering industries.

The processing of customer's components sub-contracted to us for surface treatment takes place under the most modern production control techniques from the inspection of incoming goods, to chemical and mechanical pre-treatments, on to the surface treatment itself, followed by any post-treatments and quality inspection right through to shipping modern control methods such as barcoding are employed.

From special surface treatments of complex parts to the processing of high volume components, whether large or small, simple or complicated 100% quality control and Express Service offer the highest degree of flexibility. METAPLAS IONON is the right partner for coping with all your technical, quality and production needs.







## ADVANTAGES

**Faster and more reliable service with a high level of flexibility and the highest quality.**

### Express Service

IONIT<sup>®</sup>, IONIT OX<sup>®</sup> and MAXIT<sup>®</sup> from one source

Conventional heat treatment processes

Single and volume part production

From the smallest items to large parts over 20t

Most modern inspection and analysis technology

Certification according to ISO 9000 ff

The most modern cleaning systems

Mechanical processing

Special and multi-layer systems





## The perspectives

METAPLAS IONON – your partner for the future – offers you the guarantee of being able to continue to supply the right solutions in the best interests of your customers for the tasks and problems of a global market with its continually increasing demands.

Forward looking research and constant development of the IONIT®, IONIT OX® and MAXIT® processes combined with the most modern plant technology from METAPLAS IONON together with implementation of new, innovative ideas gives you a distinct advantage in the worldwide competitive marketplace.

Qualified advice combined with processes and systems by METAPLAS IONON plus customer-orientated engineering to solve complex problems make METAPLAS IONON stand out. Use the synergy which offers state of the art methods and equipment from a single source.

The expertise of METAPLAS IONON as a systems supplier – combined with in house processing and systems development using the most modern control and analysis technologies – will continue to make METAPLAS IONON the world's leading supplier of surface treatment technology. As a qualified supplier, METAPLAS IONON is available for all needs. From solving problems concerning single components to manufacturing complete assembly lines. METAPLAS IONON is your expert partner for all the steps needed to find the solution, from preliminary treatment to complex layering to customer specifications, right through to quality assurance.

Even for special developments and highly advanced dedicated systems, the experience and knowledge of METAPLAS IONON will convince you. A multitude of special process solutions including special inline installations and systems for solar cell surface coating proves the high level of the company's expertise.

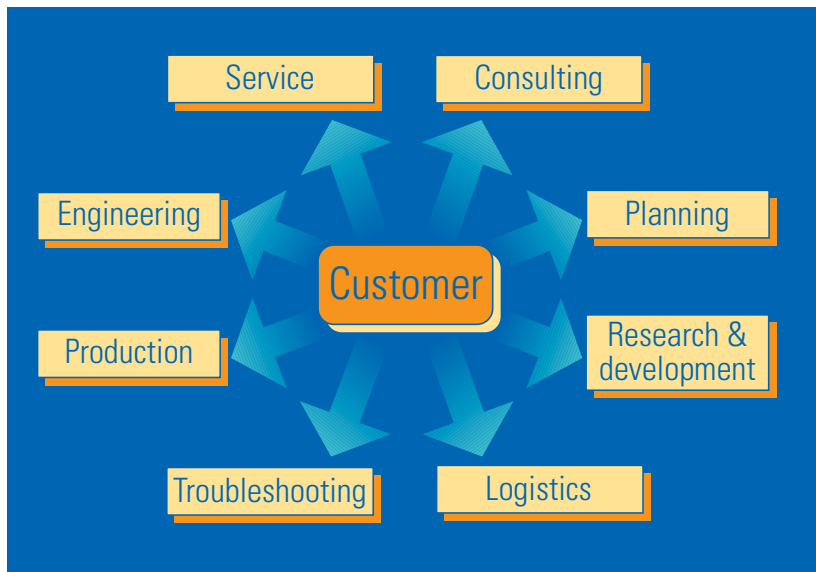
If already satisfied customers, then we would ask you to continue to trust the innovation and performance capabilities of METAPLAS IONON in future. With METAPLAS IONON consulting and service, you will be successful in the global market. Use the experience and knowledge of METAPLAS IONON to your own advantage.



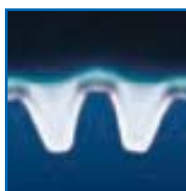


## COMMUNICATION

The customer and the solution to the problem take priority.







## IONIT®

Plasma nitriding technology and equipments, leading in technology, quality and profitability.



## IONIT OX®

Equipments and service for environmentally-friendly corrosion protection with patented nitriding processes.



## MAXIT®

PVD technologies and equipments for hard coating, low friction coating, decorative applications and more.

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