PROSINO

we keep the world spinning

WE KEEP THE WORLD SPINNING

FROM TEXTILE TO HIGH-PRECISION, OUR EXPERIENCE AT YOUR SERVICE

Since 1946, Prosino is the main world producer of spinning and twisting rings. In the post-war period, Pietro Prosino establishes the Officine Meccaniche of Borgosesia to supply the national demand in textile field. Later, in the sixties, thanks to the new approach of the second generation, the company went international, starting to export its products to the main textile markets worldwide (Europe, USA, South-America). Once the world leadership in the production of steel rings for spinning and twisting has been achieved, the company specialized in high-precision mechanics. In the nineties, with the third generation, Prosino became an important manufacturer of rings for high-precision bearings and hydraulic motors. Professionalism, high quality, and international vision are the elements for a global success, thanks also to the interaction with the best companies.

FROM THE RAW MATERIAL TO THE FINISHING, SPECIALISTS IN 100Cr6 STEEL

High wear resistance, uniform core hardness, structure stability, low coefficient of friction, long working life. 100Cr6 steel rings, rich in carbon and chrome, grant all the above mentioned qualities. Prosino purchases the raw material only from certified European steel manufacturers, and subsequently carries out all the operations of turning/milling, heat treatment and finishing inside the company itself. This integration allows to provide a customized finished product with a high added value. A dynamic sales team can perfectly communicate in Italian, French, English and German, an efficient technical department, equipped with 3D CAD working stations, effective procedures for the production planning and a careful quality control service that grants and inspects the product, assure customized items to please each client's need.

MAIN APPLICATION FIELDS

Textile Machinery

This is Prosino original sector. The company produces spinning and twisting rings for any cotton/wool spinning frame and twisting frame that exist on the market. The offer includes also a wide range of complementary products: steel and aluminum ring holders and metal sheet ring rails. A further specialization is represented by a niche production of sintered steel rings for applications in the technical textile field (carpet yarn, fiber glass, synthetic yarns). The sales are equally divided among spare parts for spinning machinery all over the world and OEM business for European and Asian manufacturers of textile machinery.

High-precision bearing industry

This is an extremely demanding sector to which Prosino responds with flexibility, high quality and timeliness. The company's clients are the major European manufacturers of high-quality bearings that supply mainly the market of machine tools and aerospace machinery. Prosino supplies angular contact ball bearings (ACBB), single row or double row rings for cylindrical roller bearings (N and NN series), and spacer rings. All of them with outer diameter from 8 to 300 mm. Thanks to perfect commercial and technical understanding Prosino is able to create trusted clients and enjoy partnerships involved in the planning stage (with interchange of technical solutions), in quality aspects and production phases.

Hydraulic motors

Prosino is also specialized in the growing market of radial pistons hydraulic motors. The 100Cr6 steel is an excellent solution that meets the necessities of this field, that requires very solid products capable to resist to a strong stress. Prosino is also an important and qualified supplier of retaining piston rings.

CONTINUOUS COLLABORATION: FROM THE PROJECT TO THE ACTUAL IMPLEMENTATION

Prosino's activity is not confined to the pure implementation of customer's drawings, but thanks to its 60 years experience is also able to offer a co-engineering support to its customers. The collaboration involves the creation of new geometry aimed at the production optimization and cost reduction –for the client's benefit-, and the selection of thermal and/or surface treatments.

The company presence in different industrial sectors created synergies that allowed to apply technical solutions from one field to every field. Two of the major tools used by Prosino in order to offer customized products is a pre-manufacturing study of the item on the 3D CAD working stations and an absolute freedom in turning thanks to shaped tools profiled with EDM machines.

Our clients have acknowledged our production process flexibility and excellent problem-solving attitude for 60 years. Innovative manufacturing technology, specialized staff and planning advisory service assure prompt solutions to any necessity. Prosino is a reliable and experienced partner that can truly keep the world spinning. Among the various appreciation certificates received we highlight the certificate issued by GMN Paul Müller Company, an important client of the company since many years.

GMN Paul Müller Industrie GmbH & Co. KG

PROSINO s.r.l
Dr. Pietro Prosino

P.O. BOX 20
I – 13011 BORGOSESIA (Italy)

01.06.2005

Dear Dr. Prosino

We would like to send you the following public statement:

GMN works with PROSINO since many years.
During this period, we have a good working relationship.
PROSINO delivers bearing rings in a good quality and they have adequate prices and delivery time.
Very import is the good performance of PROSINO regarding to problem solving.

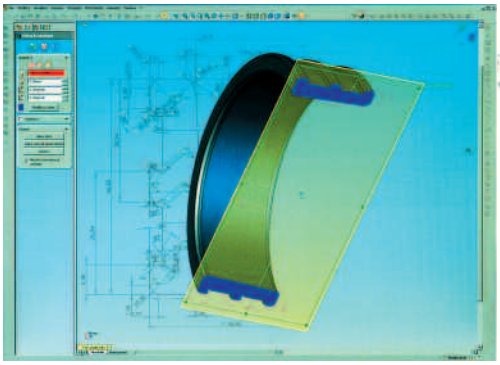
We are looking forward to continuing our good business relationship

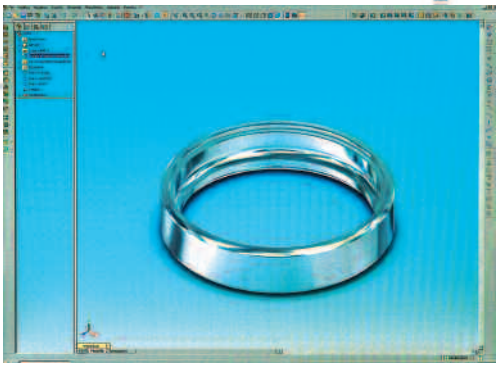
Best regards

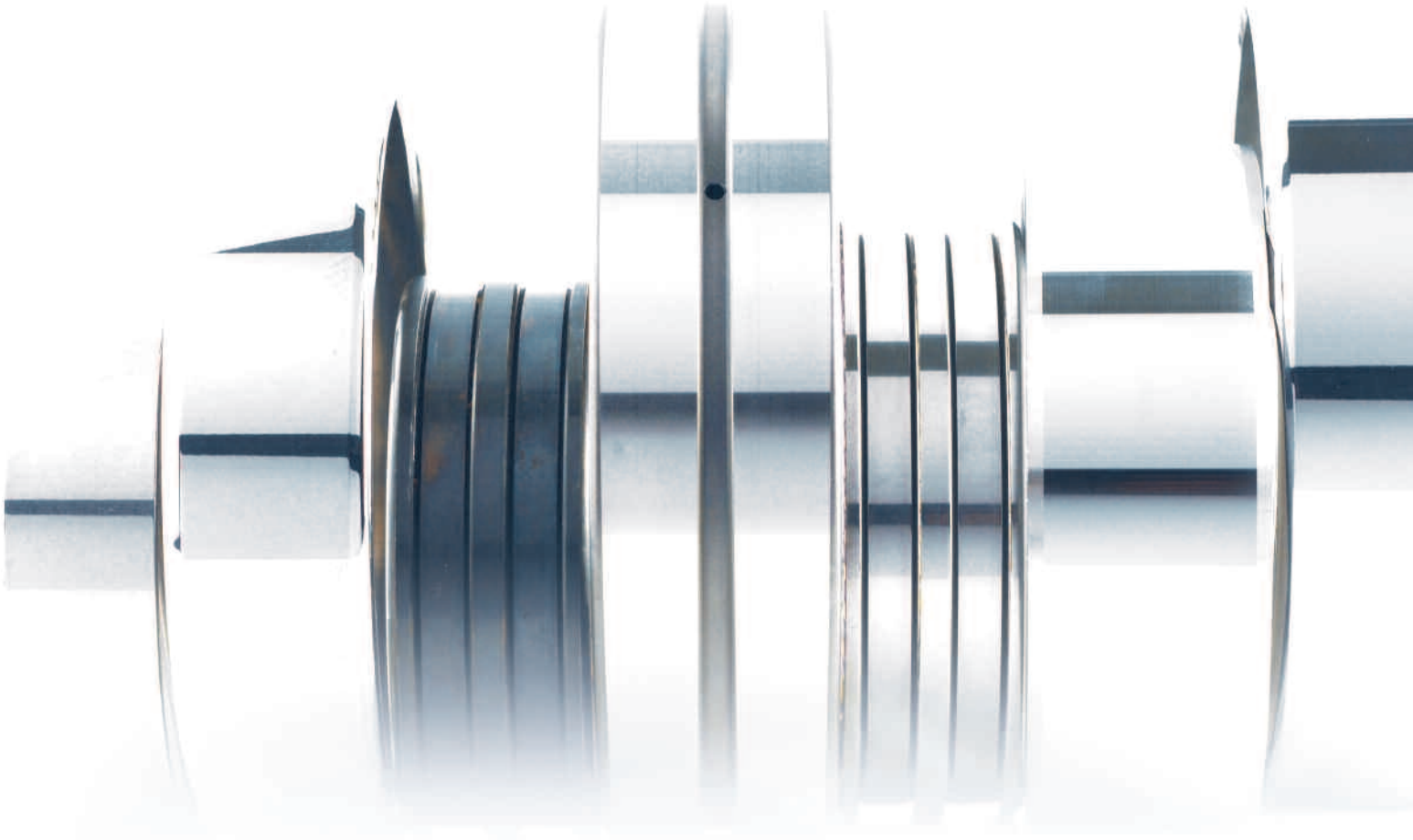
Kurt Buchner

Vice President
Production and Engineering
High Precision Ball Bearings

PRÄZISIONSKUGELLAGER







TOTAL QUALITY

The concept of Total Quality is the base of Prosino's intent. High-quality standards and consistent controls in all the production phases allow the manufacture of a reliable product with almost no defectiveness ratio.

All the controls on the incoming raw material are carried out by the metallurgical laboratory. The focus is on the Brinnell hardness and the analysis of the non-metallic inclusions. The subsequent accuracy examinations involve controls over the carbides network and estimation of the carbon content.

In all the turning stages dimensional controls with S.P.C. techniques are performed on the main piece dimensions. The approval for the production start is given by a staff member that uses both the profile projector and the profilometer. During the entire turning process constant visual check and roughness controls are performed by the workers themselves.

The heat treatments are followed by superficial Vickers hardness checks and core Rockwell hardness tests. The metallurgical laboratory furthermore tests the heat treated steel structure, the austenitic grain size and the level of residual austenite.

An attentive and precise final check provides the test certificates that will be sent to the client together with each batch. In this way all the produced lots by Prosino have their histograms of the main inspected dimensions.


ITALCERT®

CERTIFICATO N° 023/05

Sistema di Gestione per la Qualità

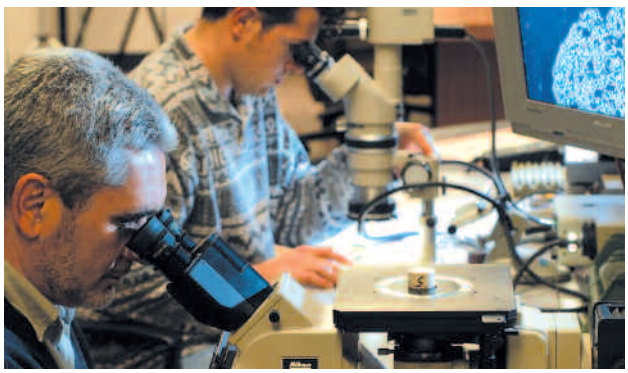
PROSINO S.r.l.

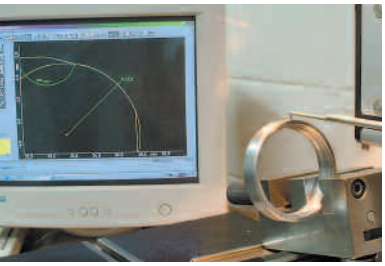
UNI EN ISO 9001:2000 (ISO 9001:2000)

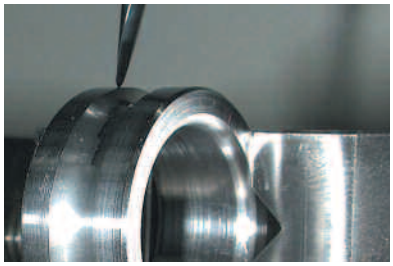
Progettazione e fabbricazione di anelli per filatura e per

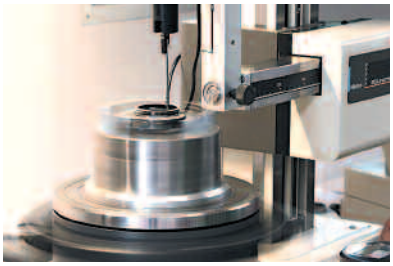
SINCERT

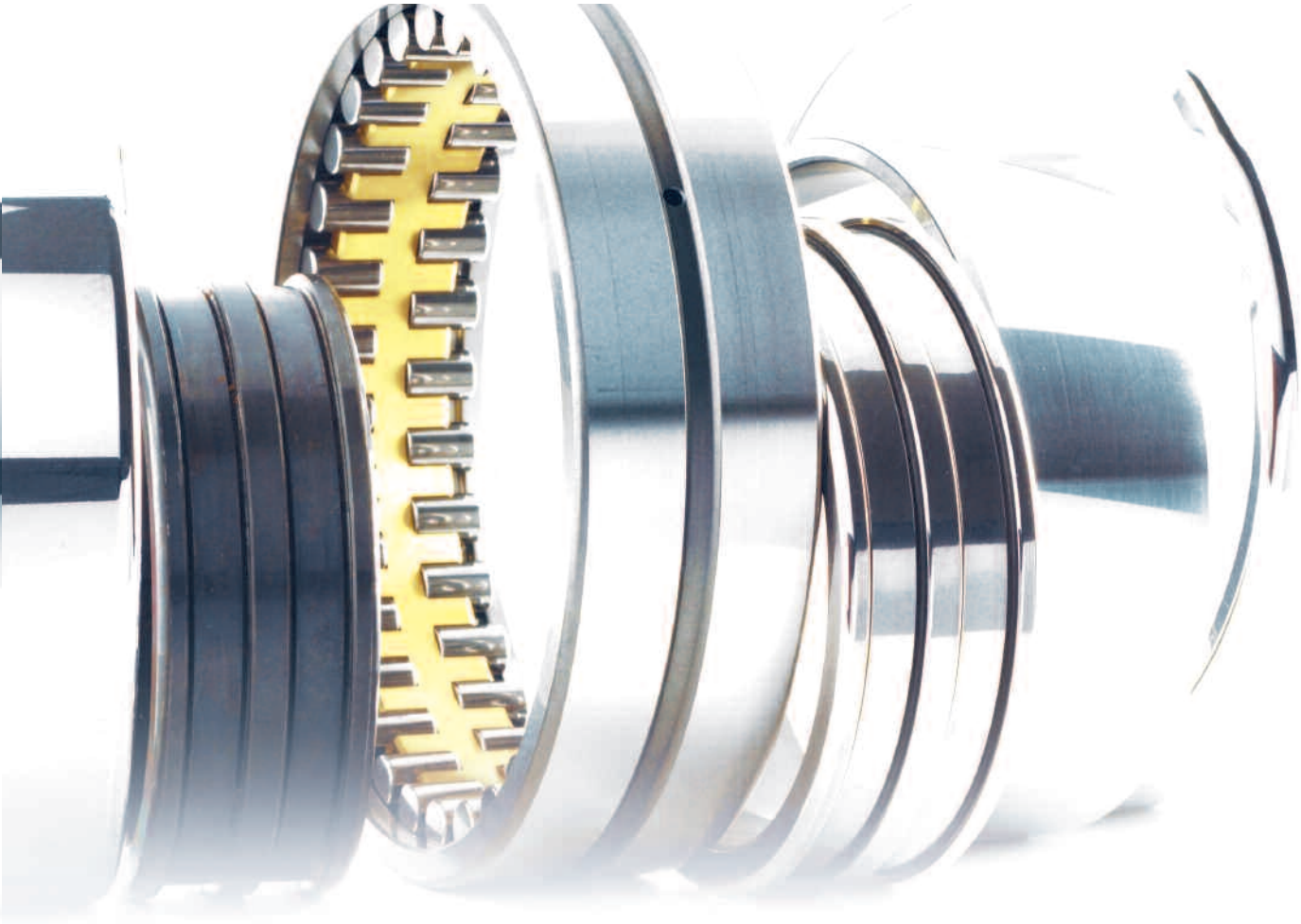
Design and manufacturing of spinning rings and of rings for high precision ball and roller bearings











AN INTEGRATED PRODUCTION

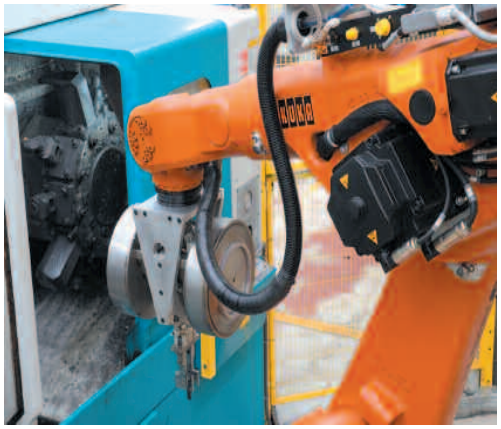
The production process starts from the turning operations carried out using c.n.c. lathes and multi-spindle mechanical lathes. Later the rings are heat-treated in two different furnaces according to the size of the item. Finishing operations are made with vibrators and sand blasting machines. Further surface treatments are available by selected and qualified suppliers: black-oxiding, nickel plating, phosphatisation, hard chrome plating, sand-blasting. Hard-turning operations are carried out using c.n.c lathes.

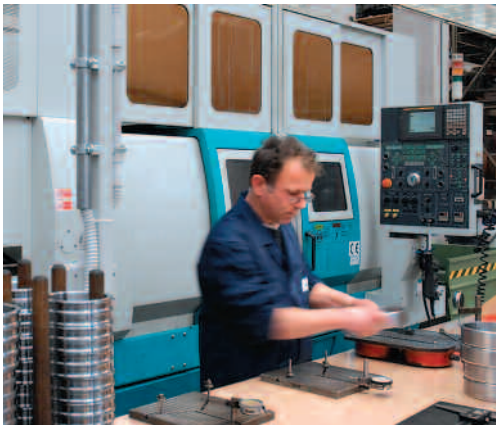
TURNING	HEAT TREATING	FINISHING OPERATIONS	SURFACE TREATMENTS	GRINDING

TURNING

Prosino's flexibility is granted by a very well stocked storehouse with 100Cr6 steel tubes, in more than 100 sizes. Turning operations are carried out for small diameter rings and for high quantities using GILDEMEISTER multispindle mechanical lathes with bar capacity of 100 mm. Prosino autonomously manufactures shaped tools with modern EDM profiling machinery, granting a very low roughness level. This improves the production autonomy and flexibility.

The rings with large diameters (up to 300 mm) or with complex profiles, are manufactured using 10 c.n.c. lathes (OKUMA/HOWA, TAKISAWA, DOOSAN, MORI SEIKI, BIGLIA) with 4 controlled axis and drilling/milling tools.

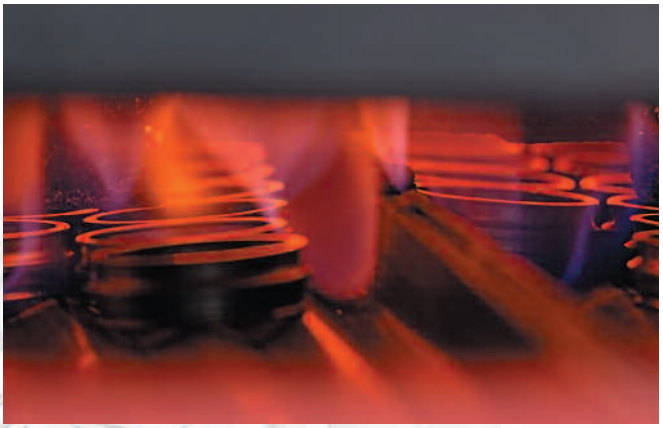




HEAT TREATMENTS

The turning procedures are followed by a heat treatment of the rings performed inside the company. The long experience in this field and the collaboration with the most demanding customers lead Prosino to a perfect mastery of this delicate production stage. Modern furnaces with atmospheric control system can treat also big lots.

Thanks to the research carried out with the most demanding customers we could implement a special “S0” cycle with double annealing treatment and cryogenic stage allowing levels of residual austenite lower than 3%. The washing before and after the heat treatment grants a perfect cleaning of the item. Carbon-nitriding and nitriding treatments are also possible.



FINISHING OPERATIONS, ANOTHER SIDE OF OUR PROFESSIONALISM

The company can count on a large department of automatic vibrators allowing the following characteristics on the heat treaded pieces:

Low roughness (µRa 0,20)
High brightness
No burrs
Total elimination of the dark color left by the heat treatment
Mild rust protection

Beside the automatic vibrators we also have sand blasting machines allowing a perfect cleaning process of the heat treated items. This treatment is specially indicated for rings with narrow grooves.

We are a reliable and complete partner of all our customers, thus we have selected some highly qualified suppliers that can carry out surface treatments on the finished pieces. A ten-year co-operation makes available:
Black oxidizing
Hard chrome plating
Phosphatisation
Nickel plating
Sand-blasting
Zinc coating

CHEMICAL AND METALLURGICAL LABORATORY

Before, during and after the production our chemical and metallurgical laboratory performs consistent quality tests. A close collaboration with selected external laboratories completes the range of the achievable check range.

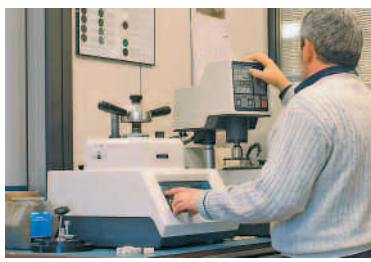
The sample tests on the raw material determine:
Chemical composition
Macroscopic inclusions
Non-metallic macroscopic inclusions
Carbon content
Carbides network
Carbide straightness

After the heat treatment the laboratory can determine:
Core and surface hardness
Quality of the heat treated steel structure
Austenitic grain size
Level of residual austenite
Level of residual tension

PROSINO CAN RELY ON THE FOLLOWING INSTRUMENTS

- Optical inverted microscope for the metallurgical sample test NIKON EPIPHOT connected with digital camera KODAK DCS 460
- Stereo microscope NIKON
- Scanning electronic microscope SEM JEOL JSM T-300
- Hardness tester Rockwell REICHERTER
- Micro Hardness Tester Vickers LEITZ
- Round Tester MITUTOYO RA 400
- Profilemeter MAHR Mahrsurf CD 120
- Roughness Tester Hommel T-2000
- Galvanic probes FISCHER MP30
- Diffractometer XRD Italstructures StessX 3000 (external laboratory)
- Carbon and Sulphur Analyzer LECO CS-444 (external laboratory)
- Stroboscope BRÜEL & KJAER 4913
- Saline mist resistance testing (external laboratory)
- Metal sample automatic preparation equipment BÜHLER



ECO-EFFICIENT PRODUCTION

Respect for the environment, eco-efficient management, and high sensibility to the healthiness of the workers are integral parts of the company's aim. Environmental aspects always influence production choices, investment allocation and supplier selection.

Thanks to the internal laboratory and the collaboration with highly specialized experts, the discharges to air, water and ground are regularly and carefully checked.

The consumption of fresh water, gas and energy is constantly monitored in order to reduce any possible waste.

Since 2003 Prosino's care and engagement for the environment protection are recognized by the international certification ISO 14001.

ITALCERT®

CERTIFICATO N° 171/05

Si certifica che il
Sistema di Gestione Ambientale
messo in atto dalla Società

PROSINO S.r.l.
Via Nicolao Sottile, 6 - IT 13011 BORGOSESIA (VC)
nella Sede Operativa di
Zona Industriale O4- IT 28875 GRIGNASCO (NO)
è conforme alla norma
UNI EN ISO 14001:2004 (ISO 14001-2004)
per i seguenti Prodotti/Processi/Servizi

Progettazione e fabbricazione di anelli per filatura e per cuscinetti di alta precisione (incluso attività di lavorazioni meccaniche e di trattamenti termici)

Design and manufacturing of spinning rings and of rings for high precision ball and roller bearings (turning and heat treating)

IL PRESIDENTE
prof. dr. Carlo Treboni

Data 1° rilascio 2005-01-22 | Data Rinnovo 2005-10-12 | Data di scadenza 2008-10-11

SINCERT

BEFORE AND AFTER-SALE SERVICES

Our customer care starts already in the first stage of the business relationship. Specialized business staffs that can communicate with our clients in four languages send an order confirmation in the requested language (Italian, French, English, German, Spanish and Portuguese). The order confirmation contains all the order details: price, delivery date, payment conditions, main sizes of the item to be manufactured, number and revision of the customers' drawing, number and revision of the internal code that has been allocated to the item. All the information are recorded in our database and are perfectly traceable even after years.

When the product is ready the client is immediately informed with an email about the delivery date and the general details (such as delivered items, name of the shipper, tracking number and, if possible, estimated date of the item arrival).

TOTAL TRACEABILITY

Our experience in the aeronautical field and high precision leads us to implement a system of complete traceability of the production data. Of each order we can trace back:

- The certificate for the raw material implemented describing the chemical composition and other information such as casting number, inclusion analysis and hardness
- S.P.C. turning inspections recorded in our database
- Destructive examinations carried out at the beginning of each production
- Roughness tests
- Hardness and structure tests after the heat treatment
- Tests on any possible surface treatments (black oxiding, hard chrome plating, zinc coating)
- The results of the final statistical inspections carried out

OUR MAIN CUSTOMERS

COGNETEX

GMN

INA FAG

KTTM

EMA

MARZOLI

RIETER

SAI s.p.a. MOTORI IDRAULICI HYDRAULIC MOTORS

SKF

SNFA

SNR ROULEMENTS

Zinser | Saurer

ACIMIT ITALIAN TEXTILE MACHINERY

TEXBIMA CONSORZIO TEXTILE BIELLA MACHINERY

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