Holland High Tech

High Tech Solutions for Global Challenges

Holland
Pioneers in international business

NWO
Netherlands Organisation for Scientific Research

Dutch Scientific

For further information: http://www.iterbusinessforum.com

where business and science meet

www.bigscience.nl

Involving Dutch industry in Big Science

Precision Fair 2014

12-13 November 2014

iter-nl

where business and science meet

www.bigscience.nl

Iter-nl

Knowledge Transfer

Instrumentation Development

Industry Days & Matchmaking

Engaging 300+ Dutch Companies

The ITER-NL initiative brings together the know-how needed to develop and construct specific parts of the ITER international fusion experiment. Our aim is to enable Dutch companies to have strong participation in ITER and to facilitate front-line participation of Dutch research in the scientific exploitation of ITER.

ITER-NL is a consortium between four Dutch research institutes: the Netherlands Organisation for Applied Scientific Research TNO, the Foundation for Fundamental Research on Matter FOM (with her FOM-Institute for Plasma Physics Rijnhuizen), the Nuclear Research and consultancy Group NRG, and Eindhoven Technical University, TU/e.

If you are interested in cooperating with a Dutch company, please contact Toon Verhoeven.

Contact:

Ir. Toon Verhoeven
Dutch ITER Industrial Liaison Officer

P.O. Box 1207
3430 BE Nieuwegein
mobile: +31 653 40 28 53
A.G.A.Verhoeven@differ.nl

www.ITER-NL.nl

Dutch Scientific and Big Science

Holland has been joining many Big Science programs for over 60 years. Examples are: particle accelerators like the LHC at CERN, fusion like ITER, optic- and radio telescopes like the E-ELT and Lofar but also light sources, free electron lasers and neutron facilities. Regardless that these projects are very important for Dutch scientists who obviously belong to the top in the world, many highly technological companies in the Netherlands are involved in building these large instruments. There is no doubt that innovation is driven by science and the development of scientific instruments. Innovative companies are the first to emerge when a crisis ends.

Dutch Scientific used to be an organisation of firms developing for science in close cooperation with scientific research institutes and their engineers. Now Dutch Scientific has been re-invented by the Dutch Industrial Liaison Network for Big Science and will be supporting all Dutch high-tech systems companies for doing business with Big Science. The Dutch ILO-net is a network of Industrial Liaison Officers in the Netherlands supported by the Dutch government and NWO.

The Netherlands Organisation for Scientific Research that funds thousands of top researchers at universities and institutes and steers the course of Dutch science by means of finances and research programmes. Since companies listed in this booklet are very well equipped for translating their scientific knowledge to commercially applicable solutions, Dutch Scientific proudly presents a number of frontline high-tech companies who can support you with any project in which you want to be successful.

November 2014

Ir. Rob Klöpping
Dutch Industrial Liaison Officer
Netherlands Organisation for
Scientific Research (NWO)
Science Park 105
1098 XG Amsterdam
The Netherlands
T:+31 205 92 20 91
klopping@nikhef.nl

www.bigscience4business.com

NWO
Netherlands Organisation for Scientific Research

Dutch Scientific

Contents

3D Worknet

3D- Worknet – The 3D mass customization printing company.

Product information

3D Worknet manufactures parts using the latest additive manufacturing technologies (also known as 3D printing). 3D printed parts are often only used as prototypes, but in an increasing number of applications 3D Worknet supplies fully functional end products. Our very efficient production facility is suited for cost effectively manufacturing small to medium sized series of high quality parts.

The 3D Worknet online portal gives our customers a user friendly method to upload 3D CAD data for quoting and ordering. Please visit www.3dworknet.com all call one of our sales engineers for further information.

References

Philips Consumer Lifestyle – Philips Lighting – KLPD – Robert Bosch Packaging – VUmc FMT – UMC Utrecht – ESA / ESTEC – Plasticum Group and many more

Sander Smit
CEO

Maxwellstraat 21
6716 BX EDE
T: +31 318 76 90 77
info@3dworknet.nl

www.3dworknet.nl

3D WORKNET
the mass customization 3D printing company

Advanced Solutions Nederland

Advanced Solutions Nederland is a hi-tech design consultancy that specialises in providing custom made DSP (digital signal processing) algorithms and hardware design services for a broad portfolio of sensor measurement applications.

Product information

Our core competence is the development and implementation of advanced signal analysis algorithms for high performance sensor applications. Typical applications include: noise reduction in speech/audio data, automotive radar tracking algorithms (speed cameras, collision avoidance systems), feature extraction, and non-linear system identification.
Whether you require feasibility advice, critical thinking, or a fully integrated product solution, we offer a comprehensive range of managed services at any stage of your product design. Building upon our track record of providing international businesses with working prototypes, we integrate the best technologies and talents in order to convert your concept into reality.

Summary of core competencies

- Real-time DSP algorithms.
- Non-linear signal analysis.
- Simulations.
- Embedded software.
- Low noise, ultra-precise instrumentation and measurement systems.
- Prototypes.
- Proof-of-concept demo systems.

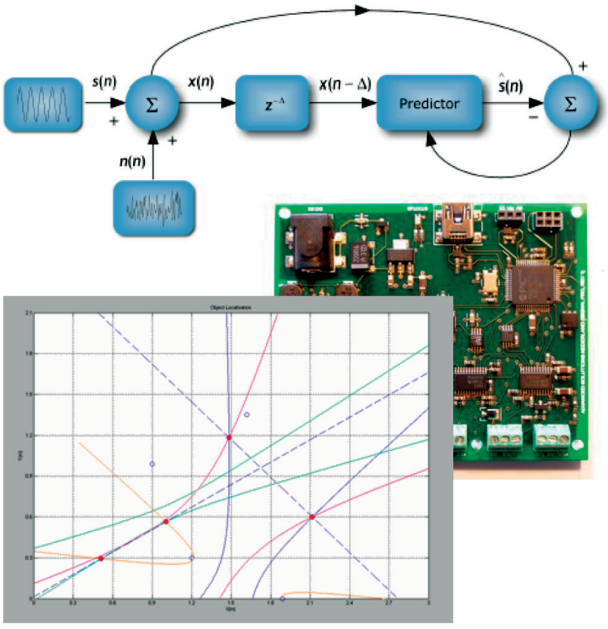
Selected references

Mitsubishi Electric (UK) – Shell (NL) – Etronic (DK) – Hi-tech RF & Microwave solutions (NL) – Gatsometer (NL) – Gnoka (NL) – NeuroRobotics (UK).

Dr. Sanjeev Sarpal
Director

Lipperkerkstraat 146
7511 DD Enschede
T: +31 624 93 97 18
info@advsolned.com

www.advsolned.com



Amsterdam Scientific Instruments

We offer you the benefits of cutting edge detector technology developed by the Medipix collaboration lead by CERN.
Our customer-focused team consists of scientists and engineers with a vast global experience covering all aspects of particle detector technology. We close the gap between innovation at the frontier of science and ready-to-use products for science and industry.

Product Information

Our Timepix hybrid pixel detectors can be used in a wide range of applications.
Besides X-ray imaging, ASI detectors are used for precise spatially resolved detection of electrons, neutrons and heavy charged particles. We also offer our detector in a vacuum compatible system.
Conventional detectors use a counting method. We offer clever pixels: every pixel can operate in three different modes. These are counting mode, time-over-threshold and time-of arrival mode.
For more information on our products, please visit our website: amscins.com or write us an email: info@amscins.com.

References

Nikhef, NL
AMOLF, NL
Reactor Instituut Delft, NL
Royal Adelaide Hospital, AU
Tribogenics, USA
Brookhaven National Laboratory (BNL), USA
Princeton Plasma Physics Laboratory (PPPL), USA
Stanford (SLAC/LCLS), USA

Dr. H.R. Poolman
CEO

Science Park 105
1098 XG Amsterdam
T: +31 (0)205 92 20 71
info@amscins.com

10 employees

www.amscins.com

AMSTERDAM SCIENTIFIC INSTRUMENTS

Bakker Fijnmetaal

Company Profile

Bakker Fijnmetaal BV – development and manufacturing of ultra-precision parts and assemblies. Bakker Fijnmetaal concentrates on cutting technology based from proto up to high volume production with a far-reaching qualification standard.

The completely automated machinery guarantees short lead times and cost-efficient-production. Materials used include copper, brass, stainless steel, aluminum, titanium and various plastics.

Bakker has an assembly hall and a clean room, class 10.000 where experienced professionals carry out assembly work. All the means required to clean and assemble products are in house available.

To develop customer-specific products, Bakker Fijnmetaal uses Hypermill CAM software. Bakker Fijnmetaal is able to assist from idea, new product introduction (NPI), DFM (Design for Manufacturing) up to release for volume (RFV).

Dirk van Amelsvoort
Accountmanager

Ekkersrijt 1310
5692 AH Son
T: +31 (0)499 47 34 16
F: +31 (0)499 47 72 29
Dirk@bakkerfm.nl

www.bakkerfm.nl

BAKKER
fijnmetaal
precies, daarom

From 1 to 10.000 pcs, parts and assemblies!

Bayards Aluminium Constructions

Thanks to 50 years of experience in designing and manufacturing high-quality complex Aluminium structures, Bayards has become one of the most ground-breaking construction companies in Europe, establishing itself as an industry leader while gaining international momentum with each project.

Product information

With our innovative approach to design, fabrication and assembly of complex aluminium products, we have the expertise and the capability of working on projects with very specific requirements. The solutions we offer are tailored specially to our customers needs, engineered and built in accordance with the latest international safety regulations and highest quality standards.

Bayards production capabilities

- High speed profile milling machine
- Friction stir welding machine
- Gantry machine
- High speed milling machine

With our state of the art equipment, the possibilities are limitless.

Reference

A remarkable example of our work is manufacturing components for the Cern's newest generation of practical accelerators (LHC) which are used for fundamental scientific research. This project was ordered by the European Organization for Nuclear Research (CERN - Conseil European pour la Recherche Nucleaire).
It involved precision machining, orbital welding, x-ray, vacuum- and helium leak-testing. Like all our projects, this too was completed to the full satisfaction of our very demanding client.
Please visit our website for more information and track records.

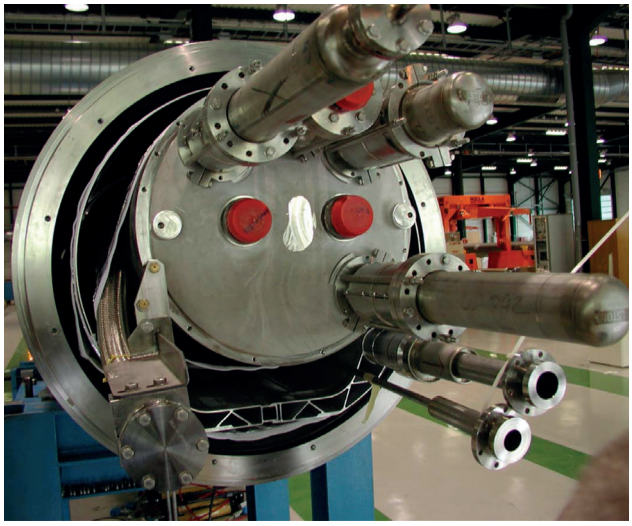
Ing. Dies W.S. Mackintosh
Managing Director

Veerweg 2
2957 ZG Nieuw-Lekkerland
T: +31 184 68 30 00
dies.mackintosh@bayards.nl

Turnover: 25 M€ | 135 employees

www.bayards.nl

BAYARDS®
solutions in aluminium



Boessenkool

Machinery Manufacturer Boessenkool: knowledge, competence and facilities. Co-maker mentality. Pro-active thinking and handling. Based on a complete knowhow and service mentality. Engineering, steel structures, metalworks, mounting facilities and mechanical machining. When needed also supplied with controls, electronics and final treatment. For that reason "Made by Boessenkool" is a guarantee for quality and success to many of our customers.

Product information

Product	Description	Customer
Beampipe Bake Out Shell	Beampipe for electrons, matter research	CERN (CH)
Revolver Mobile Undulator Carriage	Electron fibration tool , matter research	E.S.R.F. (FR)
Galacsi Structure + Graal Tools	Alu structure to mount mirrors for space research	E.S.O. (D)
Product & Utility Swivel	Off-shore FPSO (Oil Production & Storage Unit)	Bluewater Energy Services (NL)
Rotary Bottle Filling machine	Bottle filling machine for the food industry	Stork (NL)
Compression Piston Rods	Piston Rod for high pressure compressor	Thomassen Compression (NL)
Rollers & Shaft for Test Bench	Rollers & Shaft of a testbench for trucks diam. 5 mtr.	Froude Hofmann (GB)
Warehouse Stacker Crane	Order picking unit for warehouses upto 40 mtr. height	FKI Logistex (World Wide)
Vacuum Vessel	Vacuum vessel for Wafer-Stapper production	ASML (NL)
Bearings & Gears	Bearing & Gear for Windmills upto 4 mtr. Diam.	Siemens (D) / Flender (D)
Services	**Description**	**Max. weight**
Milling	Upto 10 meters to 4 meters to 2 meters	60 tons
Boring	Upto 10 meters to 4 meters to 2 meters	60 tons
Turning	Upto 6 meters length with a diameter of 1 meter	20 tons
Vertical Turning	Upto 5 meters diameter with a height of 4 meters	60 tons
Fabrication	To customer specifications	120 tons
Welding	Certified welding in all materials and thicknesses	120 tons
Machine-building	Hardware incl. electronics, pneumatics and hydraulics	120 tons
Assembly	Products upto 60 meters with weight upto 120 tons	120 tons
Project-management	Projectmanagement incl. traceabillity	
Powder coating	Upto 4 meters long	
Hoisting	Hoisting capacity inside the factory is 120 tons	Max. 120 tons

Ing. E.M. Osse
CEO

Tufkade 13
7602 PA Almelo
T: +31 546 48 88 00
info@boessenkoolbv.nl

Turnover: 5 M€ | 40 employees

www.boessenkool.com

MACHINEFABRIEK Boessenkool
Osse Equipment Manufacturing Group

Revolver Mobile Undulator Carriagesfor the E.S.R.F. in ,France. Repeating Paralellism tolerance between the beams is 0,05 mm over 2,5 meters incl. beam rotation.

Large Welding constructions including the Large Machining against small tolerances in just one factory!

Butraco

let BUTRACO hatch your idea!

BUTRACO is a small service oriented prototyping activity for machines & parts. We not only engineer but also manufacture. To save time and costs we often work from a sketch only, or convert/ adapt existing products. Knowing many production techniques and having a large network of sub suppliers we can offer the best suitable production technology. Our way of working guarantees professional solutions and low throughput times. We can deliver in a timeframe that it normally takes to merely draw it on paper .

Our offer:

- One stop shop for prototypes: we engineer **and** have it made.
- Over **25 years experience** in machine building and part making.
- **Know how**; always the best suitable production technology.
- Small, flexible, and thus **speedy results**.

References

Mostly universities or research institutes e.g. Technische Universität München (ZAUM) Germany; RIVM, The Netherlands, Adam Mickiewicz University, Poland; University of Evora, Portugal etc .

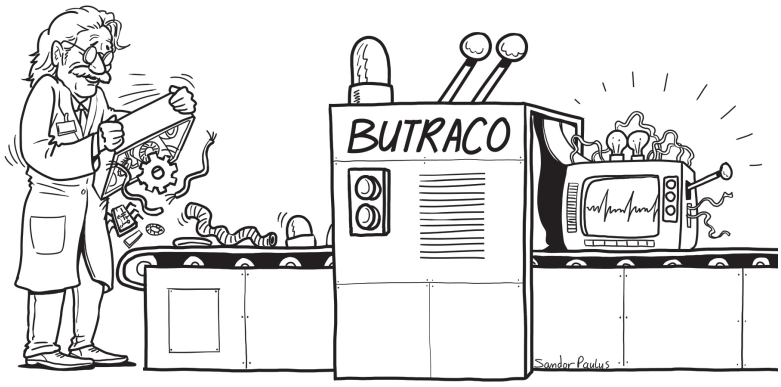
Mr. P. (Pim) Buters

Bijenlaan 26
5692 VB Son en Breugel
T: +31 (0)499 46 30 84
buters@butraco.nl

www.butraco.nl

BUTRACO

expierenced in machinebuilding



CAPABLE BV

Cables and connections. That is the strength of Capable BV Cable Application Engineers. We develop customer-specific specialty cables and connectors as well as systems for a broad diversity of applications in high-tech environments (e.g. space industry, offshore and medical). Years of experience, a broad knowledge base and expertise in specialty cables are the basis for our solutions. You won't find a catalog at Capable; we develop unique solutions for every individual application. Capable is part of the TKH Group NV, an international group that is specialized in advanced telecommunication, electrical and industrial solutions (www.tkhgroup.com). Capable is an exclusive partner of Axon' within the BENELUX.

Products and services of CAPABLE BV

- Innovation support
- Micro-connection
- Micro assembly

Mr. Alex de Wijs

Weidehek 109
4824 AT Breda
T: +31 (0)76 541 64 56
info@capable.nl

www.capable.nl

capable
create your connection

Carl Zeiss Industrial Metrology

A CNC coordinate measuring machine (CMM) is only as good as the information it provides. Information that can save time by improving processes, save money by reducing scrap, and help in the production of high quality parts. Carl Zeiss is a leader in CMMs and complete solutions for multidimensional metrology in the metrology lab and production. The company is a recognized partner to the high-tech industry and its suppliers.

The offering encompasses bridge-type, horizontal-arm and inline measuring machines, as well as form, contour and surface measuring machines. All relevant modules, such as controllers, software, measuring systems and sensors are developed and manufactured in-house. This total system design results in precision of your metrology equipment and accurate results.
Recent new developments include a system to measure extremely small parts and a computer tomograph for industrial quality assurance. With its optical and tactile measuring systems, Carl Zeiss has added image processing to the application spectrum of coordinate measuring technology. Synergies have been used to create optical sensors and optimized software. The extensive CALYPSO software library enables users of ZEISS measuring technology to perform almost any measuring task.
The offering is rounded off with extensive customer services, contract measurements, part inspection using computer tomography and services to ensure optimum machine uptimes.

Products

Systems – Precision metrology products, including CMMs, surface & form, CT, optical, and more.
Software – Measuring, evaluation and management software to increase the performance of your measuring operations.
Sensors – Contact and optical sensors, even for the most sensitive surfaces. From VAST active scanning to laser to RDS articulating.
Accessories – Fixturing, styli & accessories, and system-specific options.

Services

Software/Hardware Services – Services for your CMM to ensure highest reliability and performance.
Training – Trainings for measuring software, statistic and reporting software and more.
Measuring Services – Contract measurements, calibration and contract programming in our Benelux Measuring House in Best.

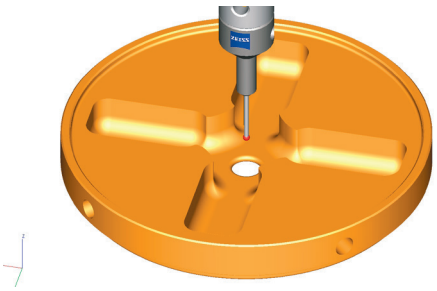
Metrology Solutions

Automotive – Machinery – Aerospace – Medical – Energy – Plastics

Albert Drenth
Business Unit Manager

Trapezium 300
3364 DL Sliedrecht
T: +31 184 43 35 51
info@zeiss.nl

www.zeiss.nl



CCM

CCM is a well experienced innovative product development company, founded in 1969.

Company Profile

We translate technology into solutions in the field of mechatronic products and systems.
Our main focus goes to the appropriate functionality, performance requirements and time-to-market, without ever losing track of product cost price and development costs.
Our competences in physics, mechatronics, mechanics, electronics and software enable us to support our customer's success.

Commitment, motivation, education and skills of our employees are the solid basis for our business approach.

CCM specializes in customized innovation for the semiconductor industry, medical diagnostics, pharmaceutics industry and the imaging and printing industry.

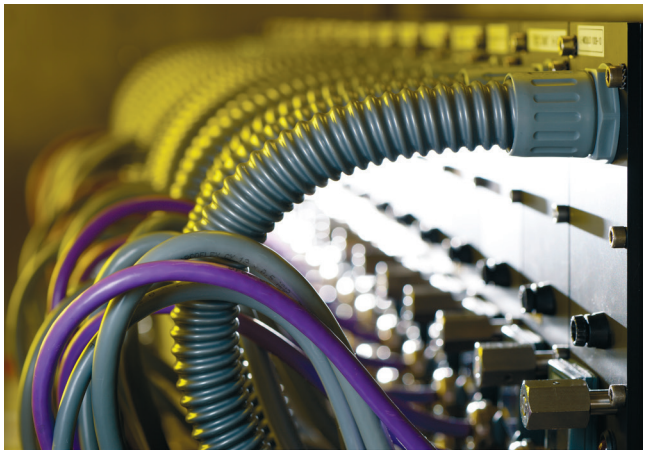
Edwin Langerak
Senior Project Developer

De Pinckart 24
5674 CC Nuenen
T: + 31 402 63 50 00
info@ccm.nl

95 employees

www.ccm.nl

centre for concepts in mechatronics



Ceratec Technical Ceramics BV

Ceratec Technical Ceramics BV has specialized in industrial technical ceramic components since 1983. Ceratec's strength lies in the complete formula of problem analysis, development, prototyping and production. Alongside various processing techniques, special joining techniques are applied for production of composite products made of technical ceramic and metal. The requisite metal-working processes and assembly activities are carried out in-house. We produce both small and larger series. Ceratec develops and manufactures products made of technical ceramics for customer-specific applications.

Production capabilities

Green stage shaping and sintering – OD grinding, max 500mm, max length 1500mm – Honing min 0.6 mm inner diameter – Flat and profile grinding – Centreless grinding min 1mm, max 60mm (tolerance 2 microns) – Lapping with surface roughness of Ra 0.01 um – Coördinate grinding – Drilling of small holes, min 0,3 mm – 4-axis CNC grinding – CNC OD grinding – CNC turning and milling – Brazing of ceramics and corrosion resistant steel.

Assembly of metal ceramic components

We are a main supplier for various kinds of industries; mechatronics, semiconductor, space & aerospace, medical, automotive, energy, optical, (petro)chemical, R&D, pump industry etc. The ceramic precision products we supply are engineered in house, designed with solid works & cosmos, green shaped & sintered and ground with state-of-the-art (CNC) grinding machines.

Following properties make our ceramic components successful; low density, high stiffness, electrical insulator, suitable for high vacuum, wear resistant, smooth surfaces, corrosion resistant, non-magnetic.

Ceramic on the right spot!

Kees A. Visser
Director

Poppenbouwing 35
4191 NZ Germalsen
T: +31 345 58 01 01
k.visser@ceratec.nl

www.ceratec.nl

ceratec®
Technical Ceramics BV

DARE!! Development

DARE!! Development is a Research & Development company bases in Woerden, The Netherlands, specialized in the development of analog RF and EMC measurement instruments. In the past 20 years DARE!! has acquired a strong name in RF electronics. With the successful implementation of several daring RF projects for civil and military use, DARE!! Development is always stretching the limits.

Specific expertise includes

Our expertise lies in the field of:
- RF signal generation
- Analog LASER applications
- Custom made RF filters
- Custom made RF mixers
- Custom made antennae, including custom patch antennae.

In our state of the art facilities we can simulate designs, build fast prototypes and perform accurate measurements. As we can perform the total activities in house we have an very fast research and development cycle. Next to the hardware development we have our own embedded software team which has also expertise in the RF field.

References

DARE!! Development has performed projects for Dutch Defense, Dutch Government and many private companies. Our measurement systems are sold worldwide to renowned customers. Recently a RF power meter has been developed for the linear accelerator of DESY, Hamburg, Germany. This unique power meter is capable of measuring RF signals till 18 GHz at an unprecedented measurement speed of 1 Msamples/sec. At this moment the measurement speed is increased to 5 Msamples/sec. At the same time a trigger input/output is added.

Patrick Dijkstra
Technical Director

Vijzelmolenlaan 7
3447 GX Woerden
T: +31 (0)348 43 09 79
development@dare.nl

45 employees

www.dare.eu/development

DARE!!
Development

DeMaCo Holland BV

If you are looking for…

- Support in Cryogenic Engineering
- Cryogenic expertise in manufacturing and installation of your Cryogenic Infrastructure like
  - Helium Transfer Lines
  - Helium Distribution Valve Boxes
  - Helium Interconnections between your facility and the storage tank or liquefier
  - Cryostats
  - Liquid Nitrogen Systems
- Optimisation or Modification of your existing Cryogenic Infrastructure

…please don't hesitate to contact us and send us your enquiries. It will be our pleasure to provide you with a suitable proposal with your Cryogenic Solution!

As a Partner in Cryogenics and Vacuum Technology, we are continuously investing in technological innovations and optimisations.
As a matter of fact our company has been accredited to ISO 9001, SCC**, ISO 3834-2 and PED H/H1

References

CERN

- Multiple Helium Transfer Lines for LEP, LHC, ATLAS and CMS
- UHV-chambers for LEP separators
- Helium Siphons
- Liquid Argon Valve Box

DESY

- HERA-by-pass Helium Transfer Lines
- Bunch Compressor bypass pipelines I and II
- Helium Valve Boxes and Transfer Lines for the X-FEL Test Facility
- Extension for the TTF Transfer Lines

ESA

- Main Valve Boxes for the LSS Satellite Test Facility
- LN2 Transfer Lines and Phase Separators

Triumf – NSRRC – ESRF – KIT – GSI – ITER – PSI – ISRO – NIKHEF – Helmholtz – Max-Planck

Ronald Dekker
Director

Oester 2
1723 HW Noord-Scharwoude
T: +31 226 33 21 00
info@demaco.nl

65 employees

www.demaco.nl

DeMaCo
cryo and vacuum technology
Thinking in solutions

DEMCON

About DEMCON

DEMCON researches, develops and produces high-tech systems and products for our focus areas of high-tech systems and medical devices. Due to our production capabilities, DEMCON can differentiate our self from other suppliers. Our clients receive not only a blueprint but also a working product or system.

Markets

DEMCON is a high-end supplier of technologies for the high-tech systems and medical devices markets. Within these markets, our focus is primarily on development and production.
DEMCON is highly proficient at applying, technical skills and high level of expertise in order to come up with surprising solutions to complex problems. The knowledge gained in one market enables us to look at problems in other markets in an open and creative manner.

Capabilities

We have employees from a wide range of technical disciplines in every project group and make use of a large number of facilities.

- Mechanical engineering
- Software engineering
- Electronics engineering
- Industrial design
- Physics/optics
- Clean room
- Prototyping
- Production

References

Philips – ASML – FEI – DORC – SIEMENS – TE Connectivity – Bronkhorst

HenkJan van der Pol
Business Manager Hightech systems

Institutenweg 25
7521 PH Enschede
T +31 881 15 20 00
info@demcon.nl

Turnover: 20 M€ | 140 employees

www.demcon.nl

DEMCON

DH Industries

cool to excel.

DH Industries specializes in the design and production of Stirling Cryogenerators and closed-loop cooling systems. Research centers, businesses, and industries all over the world rely on our expertise to provide them with a reliable, on site supply of cryogenic liquids or cryogenic cooling systems for all kinds of applications. Our two product brands, Stirling Cryogenics and CryoZone, have earned a solid reputation in their respective field of expertise.

Stirling Cryogenics is the world's leading specialist in stand-alone cryogenic cooling systems. More than 3.000 systems are in operation across the globe, often in extremely demanding conditions. The reliability of our different versions of the Stirling Cryogenerator has earned Stirling Cryogenics an unbeatable reputation.

Stirling Cryogenics developed the Stirling-cycle cryogenerator almost 60 years ago and it has been the cornerstone of our cooling systems ever since. The Stirling cryogenerator makes it possible for our systems to produce temperatures ranging from -75 °C to -250 °C. A Stirling Cryogenics cooling system is an indispensable piece of equipment in those situations where constant cryogenic cooling is crucial, independent of bulk liquid logistics.

CryoZone offers an extensive choice of cryogenic gas circulation fans called CryoFans, cryogenic pumps and heat exchangers for third-party cryocoolers. These products are customized to create cryogenic systems specifically designed for clients who operate with a unique process design and IP.

CryoZone's expertise extends to everything that involves the control and circulation of cryogenic fluids and gases, such as LN2 and GHe, to cool and heat an application. We handle every aspect of the cryogenic process related to coding, cryogenics, pressure, heat and physical flow.

Examples of cryogenic cooling systems involving Stirling Cryogenerators and CryoFans are the liquid argon cooling system for Icarus, INFN Italy; cooling of neutron moderators at IFE Kjeller Norway and ISIS Chilton Didcot UK; several HTS cooling systems at 20 or 67K in USA, Europe, Russia, China, Korea and Japan; re-liquefaction of boil-off of methane in the LNG logistic chain.

Francesco Dioguardi
Area Sales Manager

Science Park Eindhoven 5003
5692 EB Son
T: +31 (0)40 267 73 83
E: f.dioguardi@dh-industries.com

dh-industries.com
stirlingcryogenics.com
cryozone.nl

cool to excel.

CRYOZONE
THE CRYO CREATIVES

STIRLING
CRYOGENICS

Dutch Space

Dutch Space is the largest space company in The Netherlands. It develops complex systems for space, civil & defence applications and is a System Integrator for multidisciplinary, multinational programmes. Subsidiary of EADS Astrium N.V.

Product information

Building on over 40 years of heritage, Dutch Space has acquired considerable expertise in the areas of both organizational/programmatic skills and in-depth engineering supported by advanced in-house tools and facilities, which can readily be applied to complex large research infrastructures. Typical space applications primed by Dutch Space are:

- the European Robotic Arm for the International Space Station, providing valuable heritage for ITER Remote Handling
- the main engine frame of the Ariane 5 launcher, a complex and technically demanding structural element
- various space instruments and subsystems for earth observation & astronomy, providing heritage for ITER diagnostics

Specific expertise includes

- Management of international multidisciplinary development projects
- Engineering for vacuum, cryogenic and other complex/hostile environments: thermo-mechanical & thermo-dynamic analysis; coolers, hot structures & thermal protection systems; advanced materials & processes; complex mechanisms.
- Control & robotic systems
- Real-time simulation and data-processing s/w environments

References

Customers include ESA, ESO, NASA and large European space contractors. Next to many ESA projects, Dutch Space has contributed to LOFAR, VLTI, E-ELT and is preparing for ITER contributions. Dutch Space is a key player in the high-tech industrial and institutional networks in the Netherlands.

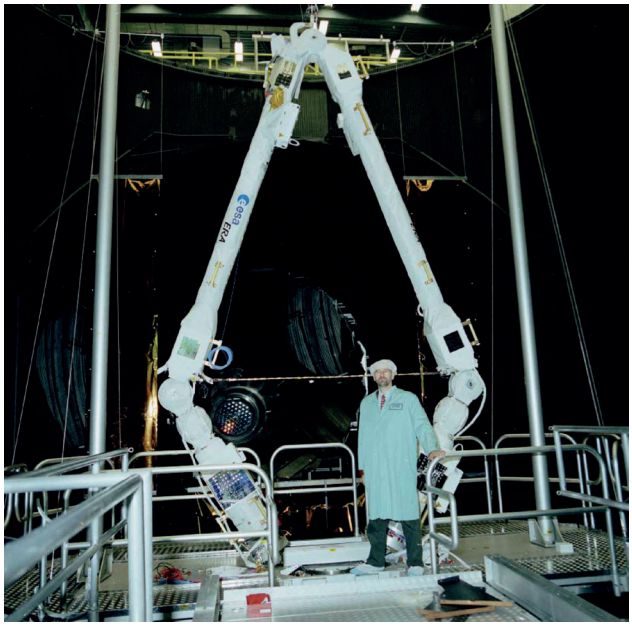
Sytze Kampen
Head of Technology & Innovation

Mendelweg 30
2333 CS Leiden
T: +31 715 24 58 20
S.Kampen@dutchspace.nl

Turnover: 75 M€ | 230 employees

http://www.dutchspace.nl

Dutch Space
an EADS Astrium company



Etchform BV

Etchform stands for "ETCHing & electroFORMing" of metal precision parts especially for high-tech applications.
With our know-how, our network and our enthusiasm we offer innovative (total) solutions with an optimal TCO (Total Cost of Ownership) during the entire lifecycle of your products.

Full Service

Etched and electroformed parts often require one or more additional processing treatments in order to fulfil their end function. These specialized treatments are outsourced, placing the requisite burden on your organization.

Etchform offers a full service option for this. With Supply Chain Management, we take over management of the supply chain as well as responsibility for the final result, thus increasing the added value and taking as much off your hands as possible.

Etchform has chosen to anchor these additional services in a strong network. Our network partners pool their resources within this network in order to realize concrete added value in the field of engineering, production and logistics. This network comprises professionals who have been successfully collaborating for years.

Additional processing options include:
- assembly;
- bending;
- precision mechanical treatments;
- laser cutting;
- surface treatments;
- heat treatments.

If YOU CAN SKETCH IT WE CAN ETCH IT

René de Vries
Product Manager

P.O. Box 4025
1200 LA Hilversum
T: +31 (0)35 685 51 94
T: +31 (0)35 683 56 16
info@etchform.com

www.etchform.nl

ECM Technologies

ECM Technologies is a company offering non-conventional electrochemical machining solutions, with its headquarters located in the Netherlands and its production facility in the USA. It has been operating on the global market from its inception in 2003.

Products & Services

ECM Technologies focuses on offering unique Research & Development (R&D) on materials, followed by Production of the requested product, as well as Consulting & Training services within the expertise of precision electrochemical machining (pECM).

Precision Electrochemical Machining (pECM/ECM)

Electrochemical Machining is an advanced metal-working technique which can machine products difficult or impossible to design through conventional machining. It is an extremely accurate technique, capable of machining any electrically conductive work, even improved and new to machine metal alloys irrespective of their hardness, strength or thermal properties.

Application

Process application: Electrochemical Machining can add accuracy and substitute the following processes: *drilling, polishing, milling, grinding, and roughening*; along with machining & designing what conventional-machining cannot, such as *micro-machining, shaping hard to reach locations, flow turning,* and *die-sinking* among others.

Industry application: Furthermore, there are no boundaries as to where pECM can be applied. ECM Technologies have researched and developed for the majority of the high industries: Aerospace & Space, Automotive, Medical, Energy & Offshore, Consumer products, and Machine Tooling.

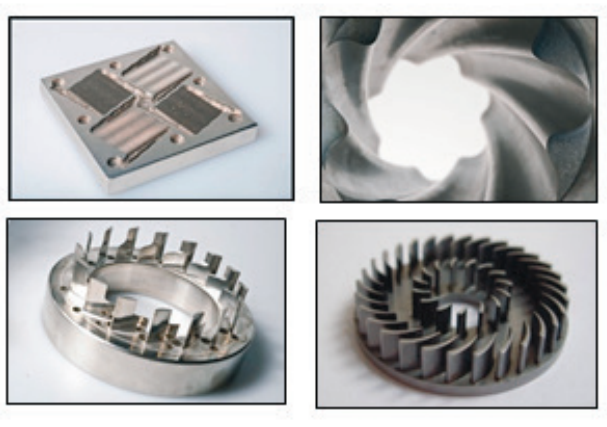
Hans-Henk Wolters
CEO

Ceresweg 42
8938 BG Leeuwarden
T: +31 622 37 97 50
wolters@electrochemicalmachining.com

Turnover: 1.0-1.2 M€ | 10 employees

www.electrochemicalmachining.com

ECM Technologies
Innovative Electrochemical Machining Solutions



Heemskerk Innovative Technology

Heemskerk Innovative Technology offers strategic and operational consultancy in the areas of robotics, mechatronics and hightech systems, and primarily targets the European institutional market.

Product information

Innovation Management – Heemskerk Innovative Technology (HIT) blends innovation management, systems engineering, and people management to support research projects and to develop spin-offs into proof of concept and market readiness, working in close cooperation with Institutes, Universities, and industrial partners.
ITER Remote Handling studies – During operation, plasma facing components of the experimental fusion reactor ITER will get activated and contaminated with radioactive and toxic materials. Remote Handling (RH) maintenance is performed by master-slave telemanipulation techniques. Heemskerk Innovative Technology develops new RH technologies and tools and validates RH maintenance sequences.
Virtual Slave – In an industrial partnership with Dutch Space and TreeC, HIT develops a simulation tool to simulate in real-time kinematics, dynamics and physical interaction of designs and environments imported from CAD software. The Virtual Slave system is multifunctional; it can be used to analyse the maintainability of components in the design phase, to validate maintenance procedures, to train operators and to provide operational support during maintenance operations.

References

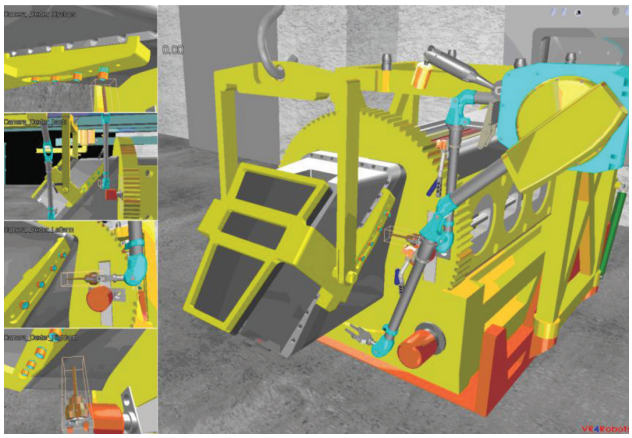
ITER – Dutch Space – FOM Insitute DIFFER – FlexGen – TNO – Oxford Technologies – VDL APTS

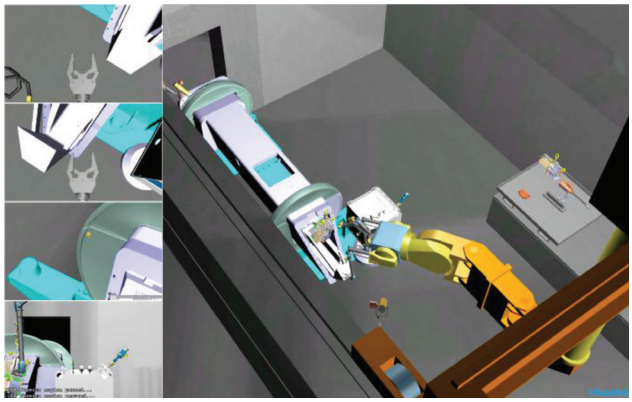
Dr. Ir. C.J.M. Heemskerk
Managing Director

Merelhof 2
2172 HZ Sassenheim
T: +31 651 34 09 66
c.heemskerk@heemskerk-innovative.nl

Turnover: 400.000 € | 7 employees

www.heemskerk-innovative.nl





Heeze Mechanics

Design and Precision Engineering for R&D Institutes since 1966; manufacturing of microwave components i.e waveguides, parts for Clic, parts for long en short Yoke, cartridge plate for RAL and parts for Galaxy.

Product information

- Design and Precision Engineering for R&D Institutes since 1966.
- Manufacturing of Waveguide (FOM), parts for Clic (CERN), parts for long en short YOKE (CERN).
- Cartridge plates for RAL (Rutherford Appleton Laboratory).
- Parts for Galaxy (ESO).

References

CERN – ESRF – ESO – Rutherford Appleton Laboratory – TNO – OMT solutions – Rimas – Philips Research – FOM

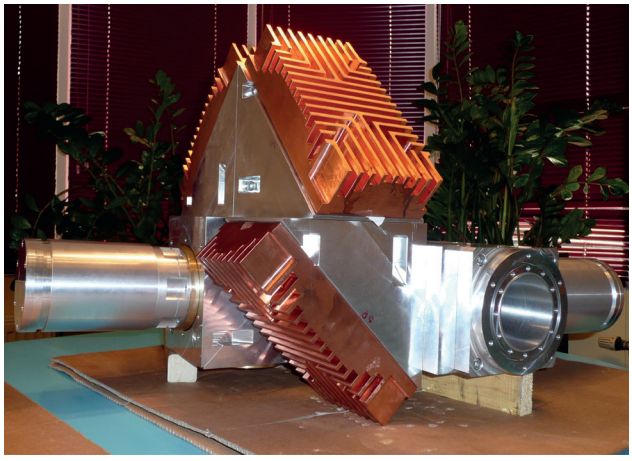
Th. van Tongerlo
Managing Director

Biesven 10a
5595 DD Leende
T +31 402 24 01 78
th.van.tongerlo@heezemechanics.nl

Turnover: 800,000 € | 5 employees

www.heezemechanics.nl

HEEZE MECHANICS



HEINMADE

HEINMADE develops and delivers piezo system solutions ranging from a single bulk piezo to servo controlled multiple axis motion platforms. With our long term experience and extended network, we are able to detect critical aspects, to control and solve these aspects and to provide reliable solutions.

Product information

Through collaboration with Noliac (DK), Nanomotion (Isr) and Piezomechanik (DE), HEINMADE offers a wide portfolio of standard products and system solutions. Over the years HEINMADE has extended this portfolio with developed custom made designs to meet the high demanding requirements of the high tech and medical industry.

Some examples of systems in production are; multiple axis long stroke motions systems, transducers, sensors and active damping systems. Present R&D work is focused on active damping, accurate dispensing and high force high precision stages. HEINMADE supplies basically all piezo related components and (sub-) systems:

- R&D work on piezo components and integrated systems.
- Design, engineering and supply of high precision metal parts like hinge structures, etc.
- (Encaged) Piezo actuators and benders (high and low voltage).
- Piezo motors and steppers.
- Short and long stroke piezo stages (actuator and motor based).
- Drivers and controllers for piezo actuators and motors.
- Active vibration dampers.
- Dispensing systems for low vapour pressure or high viscous substances.

References

Philips Apptech – ASML – ESO – TNO – TU Delft – TU Eindhoven – TU Twente – VSL (NMi) – FEI

Hein Schellens
Director

High Tech Campus 9
5656 AE Eindhoven
T: +31 408 51 21 80
hein.schellens@heinmade.com

Turnover: 1.0 M€ | 7 employees

www.heinmade.com

HEINMADE
supplier piezo ceramic solutions

Hitec Special Measuring Systems

Hitec Special Measuring systems bv develops and manufactures off-the-shelf and customer specific current measuring systems for AC and DC currents up to 50kA with scientific class accuracy and stability.

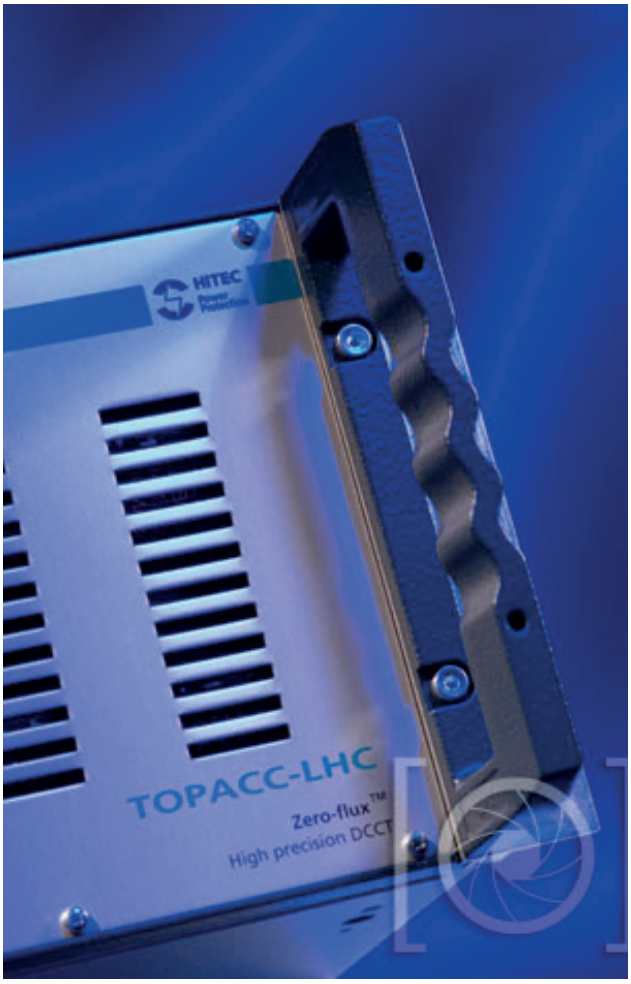
Product information

Hitec Special Measuring System, part of the Hitec Power Protection Group, has a long and impressive history in developing and manufacturing of tailor made current measuring system for AC and DC currents
Hitec was the first to introduce a revolutionary high precision current measuring system based on the Zero-flux principle.

The Zero-Flux principle enables galvanic isolated measurement of AC and DC currents with supreme accuracy, linearity and stability.
Many thousands of our systems have already been applied in High Voltage DC, Scientific and industrial applications.

References

Science: All major scientific research centers
High Voltage applications: Most of the High Voltage Direct Current links
Industry : Power metering/data logging, lithographic systems for semiconductor industry and medical imaging



R. Lachminarainsingh
General manager

Bedrijvenpark Twente nr. 40
7602 KB Almelo
T: +31 546 58 95 89
info@hitecsms.com

Turnover: 5 M€ | 9 employees

www.hitecsms.com

HITEC Power Protection

Hositrad Vacuum Technology

Hositrad Vacuum Technology combines more than 45 years of experience in vacuum and cryogenic technology. We supply standard vacuum parts CF, KF and ISO components from stock.

Product information

Hositrad Vacuum Technology

- Have capabilities covering all areas starting from a standard flange up to designing a complete vacuum system,
- Manufacturing, repair and after sales service of vacuum equipment
- Experts in TIG-Laser and Microplasma welding en He. leak testing <1x10-10 mbar l/sec.
- Laser welding for medical devices and clean technologies
- Own production and an AutoCad design in Holland and in the Far East
- "Custom made specials" according to customer drawing in our workshop
- Supply the following products: CF-KF and ISO vacuum components – Electrical/Linear/Rotary Feedthroughs - Edge welded bellows – Isolators – View ports – Fiber Optics – Glass to Metal seals – Manipulators - Ferrofluidic feedthroughs – All Metal Valves – Angle Valves – Gate Valves – Diode Ion/Triode pumps and Titanium sublimation pumps – Cryopumps – Cryostats

Hositrad Vacuum Technology represent

Ceramtec: Ceramic-to-metal sealing technology. Hermetically sealed electrical & optical components include D-type/circular feedthroughs, multipin connectors, coaxial connectors, thermocouples, isolators, viewports and accessories.
These components are ideally suited to support optical, gas, liquid, power, instrumentation and sensing applications.
ColdEdge Technologies: provides custom <4K to 1000K closed cycle cryostats with interfaces.
Extrel: Extrel is the world's leading manufacturer of Research and Proces Mass Spectrometers, Residual Gas Analyzers (RGA's), Quadrupole Mass Spectrometry Systems and Components from 1-100 amu to 16000 amu
Thermionics: Manipulators, Valves, E-Guns, Ion Pumps, MBE Systems, Mechanical feedthroughs.

References

CERN, DESY, (XFEL, EMBL, Hasylab Hamburg), Helmholz Zentrum Berlin (Bessy, HMI), FZ Jülich, GSI Darmstadt, KIT Karlsruhe, GKSS, DLR, IPP Garching, PSI Villigen, ESA Noordwijk, ESRF Grenoble, ALBA Barcelona, FOM-Nikhef Amsterdam, FOM Nieuwegein and all Universities and Research Labs in Europe.

J.L.J. (Jurgen) Tomassen
Director

De Wel 44
3871 MV Hoevelaken
T: +31 332 53 72 10
info@hositrad.nl

Turnover: 4 M€ | 10 employees

www.hositrad.nl

VACUUM TECHNOLOGY
Hositrad

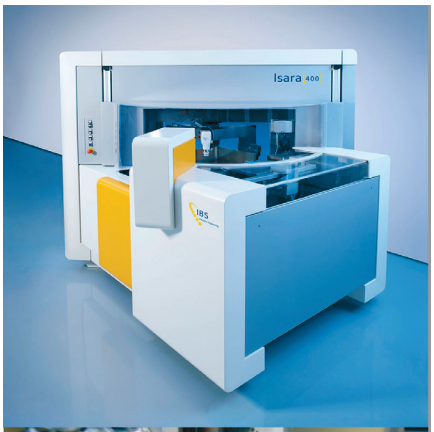
IBS Precision Engineering BV

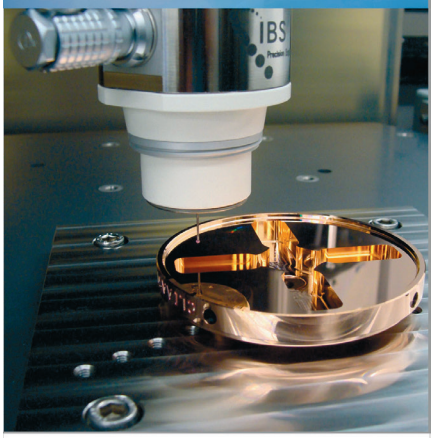
For over 20 years IBS Precision Engineering has been helping its customers to realise their demands for measurement, positioning and motion systems where ultra-high precision is required. With our expert foundation in metrology, we understand the true meaning of precision and how to help our customers achieve it.

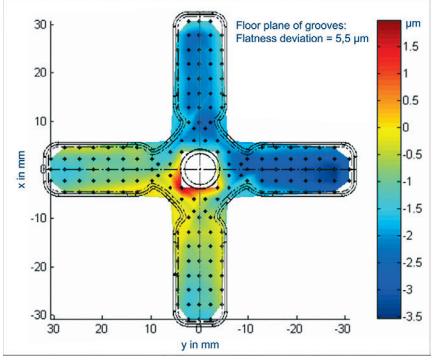
IBS products and solutions can be found at leading companies world-wide serving industries from disk drive to semiconductor equipment, printing and medical systems. In the field of machine tools we serve both builders and users with measurement systems delivering significant bottom-line productivity improvements. For the research community, we provide support from standard ultra-precision components to custom made systems.

At IBS we have a long history in successfully helping our customers address unique problems. We do this through both our standard products as well as our design house. The latter provides support from feasibility through to pilot production for modules through to machines.

From advice on component application to full system design and realisation, our aim is to deliver the innovative solutions required by our clients where leading measurement or high accuracy motion capability is critical.







Hans Ott
Sales & Marketing Director

Industrieterrein Esp 2151, Esp 201
5633 AD Eindhoven
T: +31 402 90 12 70
info@ibspe.com

www.ibspe.com

IBS Precision Engineering

Overview of companies

	*	Speciality		Management/ syst eng	Devel
		Discipline	Technique		
3D Worknet	S		3D printing		
Advanced Solutions NL	V				x
Amsterdam Scientific Instruments	S		X-ray detector		x
Bakker Fijnmetal					
Bayards	M				x
Boessenkool	S				
Butraco	S		Custom production machines	x	
CAPABLE BV	S	cables & connectors			
Carl Zeiss Industrial Metrology			Measuring machines		
CCM	M				x
Ceratec Technical Ceramics BV			Ceramics		x
DARE!! Development	M		EMC		x
DeMaCo Holland BV	M				x
Demcon	M				x
DH Industries BV	M	Cryogenic cooling systems	Cryogenerators & cold helium gas & liquid pumps		x
Dutch Space	M	Space		x	x
Etchform BV	S		etching & electroforming		x
ECM Technologies	S		ECM		x
Heemskerk Innovative Technology	S		Remote handling		x
Heeze Mechanics	S		Waveguide		x
Heinmade	S		Piezo		x
Hitec Special Measuring Systems	S		Current measuring		x
Hositrad Vacuum Technology	S	Vacuum	Ceramics		x
IBS Precision Engineering BV		Mechatronics		X	X
Imtech Industry International	L		Tailor made power conversion systems		x
INCAA Computers	S				x
Irmco BV	V		Accoustics and Waveguides		x
Janssen Precision Engineering	S				x
KIN Machinebouw	M				
Landes High End Machining BV	M				
Mat-tech	s		metallurgy		x
MI-Partners	S				x
Mogema BV	M		Welding		
National Instruments	L				
Omics2Image	V		Biomolocular imaging mass spectrometer		x
Peter Haak Productontwikkeling	V	Sensor Desgin			x
PM-Group	S		HI precision bearings		x
Precision Mechanical Prod.		Ultra precision			
S&T	S		Data analysis		x
Schelde Exotech	M				
Settels Savenije van Amelsvoort			Mechanical and process	x	x
Sumipro	S		Optics		x
Technobis Group	S		Fiber		x
TNO	L	Space	Optics		x
Van Halteren	M				
VDL Enabling Technologies Group	L				
Veenstra Glazenborg	S				
Velmon Lastechniek	S		Welding		x
Vernooy	M				
Wilting	S		high precision		x

* V= Very small 1 - 5; S = Small 5 – 50; M= Medium 50 – 250; L= Large >250

lopment	Engineering	Production	Test	Area						
				Metal		Mechatr.	Cryo	Vacuum	Electronics	Software
				Large	Small					
	x									
	x	x								
		x								
	x	x		x	x					
	x	x		x				x		
	x	x	x			x			x	x
	x	x								
	x	x	x						RF Analog	
	x	x					x	x		
	x	x	x			x				
	x	x	x				x			
	x		x			x	x			x
	x		x							
	x									x
	x	x				x				
	x	x	x			x				
	x	x	x							
	x	x	x				x	x		
	X		X			X				X
	x	x	x						Power	
	x	x	x						Anal/Digital	x
	x	x	x							
	x	x	x		x	x				
	x	x			x					
	x	x		x	x					
	x		x							
	x	x				x				
	x	x		x	x			x		
	x	x	x							
	x					x			x	
	x	x			x	x				
		x								
	x		x							Modelling
	x	x		x						
	x									
	x	x	x							x
	x	x				x				
	x	x	x			x				
	x	x	x	x	x	x				
	x	x	x	x	x	x				
	x	x	x	x	x					
	x	x	x							
	x	x	x					x		
	x		x							

Imtech Industry International BV

Imtech Industry International BV is an international operating technical service provider with focus on Project Development, Engineering & Contracting, Operation & Service. Imtech Industry International has employed specialism on the Power Electronics, Energy and Oil & Gas markets.

Company information

Imtech's business unit Power Electronics has more than 40 years of experience in the field of Power Electronics and Applications. Activities within Imtech Power Electronics are conceptual- and detailed design, construction, assembly, factory testing, installation and commissioning of tailor made Energy Conversion and Distribution Systems for Scientific and Industrial applications.

Imtech, has gained a strong reputation of tailor made Energy Conversion solutions up to the following figures:

- current: up to 150 kA
- voltages: up to 100 kV
- rated power: up to 20 MW (continuous)
- up to 150 MW (pulsed)
- frequencies: up to 100 kHz
- stability: down to 1 ppm

Our solutions find their way into various applications for:

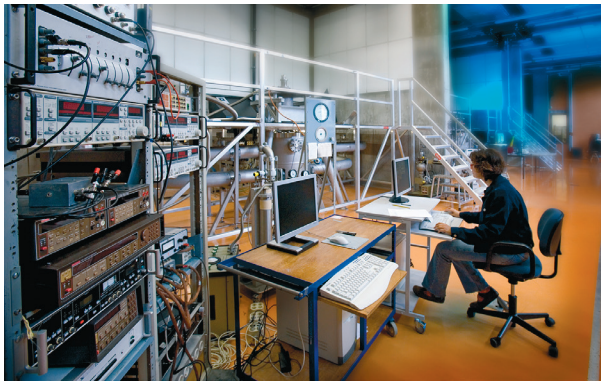
- Enrichment processes
- Nuclear fusion research
- Particle accelerators / synchrotrons
- Galvanic industry
- Film processes
- Electricity distribution grids
- Electrolysis processes
- Fuel Cell processes
- Renewable energy

Some of our references for scientific institutes

IPP Garching (D) – 145 MVA Modular Conversion System for ASDEX upgrade IPP Garching (D) – Extension of the Pulsed Power Supply Network of ASDEX by a set of Compact Modular Generators (8 MVA, 32 MJ), HFML Nijmegen (NL) – 20 MW DC Converter System – DESY Hamburg (D), Klystron modulator for the XFEL RF station Helmholtz Zentrum Berlin (D) – 8 MW 20 kA Power Converter System, Solvin Antwerp (B) – 1 MW PEM fuel cell conversion system

Erwin Lenten
Strategic Sales Manager

Modem 30
7741 MJ Coevorden
T: +31 524 59 91 23
erwin.lenten@imtech.nl



Imtech Industry International is part of the Imtech NV Group | 400 employees.
Turnover: Imtech NV 5.1 Billion € | 29.000 employees (2011)

www.imtechindustryinternational.nl

Imtech

INCAA Computers

INCAA Computers is a well-established company with over 35 years experience in design and manufacture of professional high-tech electronic equipment for industry, science, and OEM. We provide solutions for technical automation projects and take system responsibility.

Product information

Applications extend from industrial and scientific scalable data acquisition systems through transient recorders, timing systems, superconducting magnet test benches and power supply control modules to alarm and safety systems.

Hardware Development: Modules can be designed from scratch or standard modules can be tailored to customers specific needs. Characteristic product properties are the high quality level and the relatively small to medium production volumes.
Software Development: Due to our in-house hardware expertise we know best to separate projects into hardware and software functions and how to interface them to build innovative fail-safe systems. Specialisations include system software, databases and graphical user interfaces.
System Integration: We not only deliver hardware modules and software packages but also integrate these with third-party components into complete functioning turn-key systems.

References

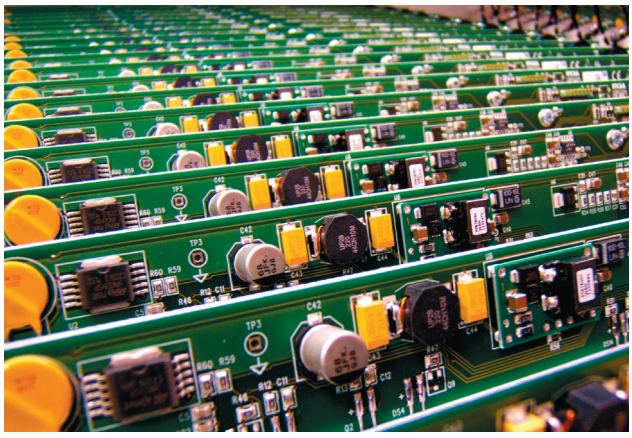
Our client base includes a wide selection of international organisations and companies:
CERN – Sincrotrone Trieste – GSI – UKAEA – MIT – FZ Juelich – Alstom – ASML

B. Sijbrandij
Project manager

Puttenstein 20
7339 BD Apeldoorn
T: +31 555 42 50 01
sales@incaacomputers.com

20 employees

www.incaacomputers.com



Irmco BV

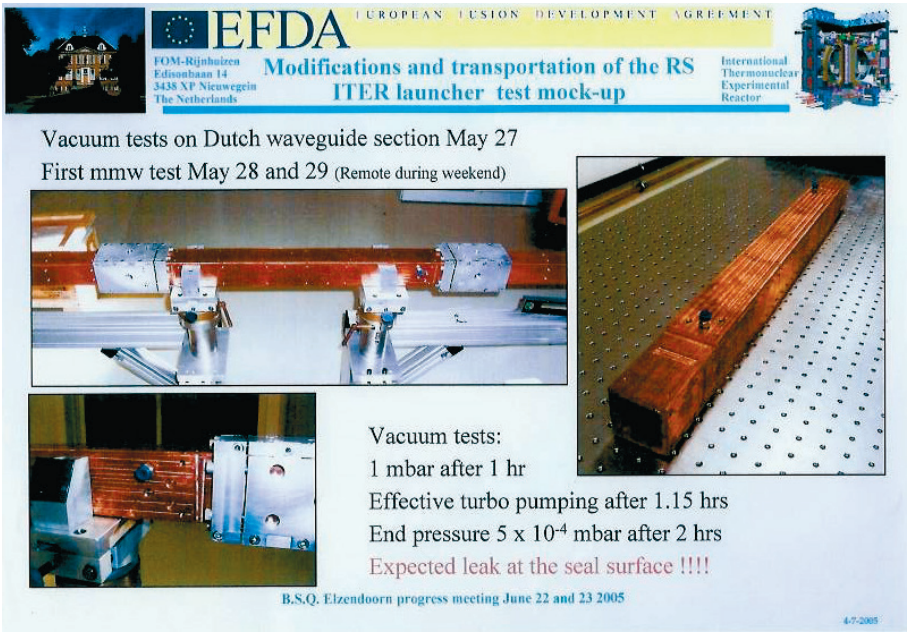
Irmco bv has been formed in 1972.

Irmco bv developed the legendary educational toy **Sjobus.**

Irmco bv takes the lead in co-operation between reliable Dutch companies.
Heeze Mechanics, Schelde Exotech, Innovation Handling, Sunfys, TNO.

Irmco bv gathers the technology experience and know-how to design and manufacture:

- **waveguides**
- **measuring instruments based on accoustics**



Michael Koot
Director

Spoorstraat 19
4849 AR Dorst
T: +31 651 49 46 73
michael.koot@irmco.nl

Janssen Precision Engineering

Precision engineering and mechatronic solutions in ambient, vacuum and cryogenic environment.

Company profile

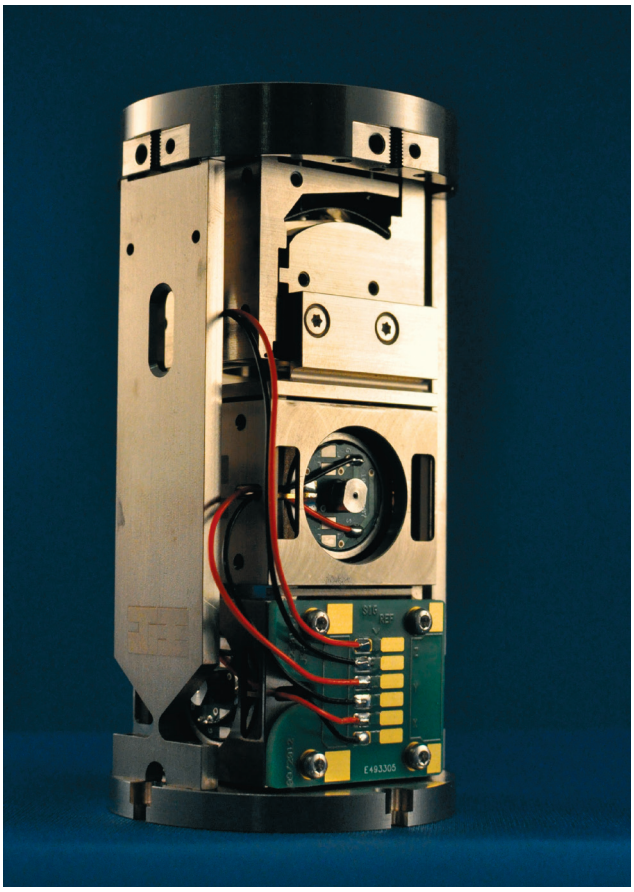
JPE is an independent engineering group for development and realization of high-tech machinery and instruments. Especially where accurate and stable performance is involved in the sub-micron area.
The company was founded by Huub Janssen in 1991 after several years of experience in the high-tech industry of companies like ASML and Philips. Nowadays, we have built up a team of professionals which are able to find and implement solutions for very challenging engineering requests. JPE has gained multidisciplinary knowledge of technical issues at every level. From system level down to component level, from definition and design, up to prototyping and qualification. By following a systematic approach with high involvement, quality and efficiency are guaranteed.

We develop high-end opto-mechanical applications to be used in deep vacuum as well as cryogenic environment. Our developments typically find their way in an international market like:market like:

- semi-conductor industry,
- astronomy and space,
- scientific experimental instruments

Competences

- precision engineering
- mechatronic solutions
- nanometer positioning
- positioning in cryogenic environment



Huub Janssen
Founder & CEO

Azielaan 112
6199AG Maastricht-Airport
T: +31 433 58 57 77
huub.janssen@jpe.nl

20 employees

www.jpe.nl

Kin Machinebouw

System supplier to the industry. Long lasting experience combined with craftmenship. Specialized in certified welding constructions and the machining thereof.

Facts

- Expert in certified welding constructions in various materials; ISO 3834-part 2 and PED module D certified.
- Modern machining capabilities: boring 1.5x 1.5mtr, milling upto 4,5 mtr, horizontal turning up to 8 mtr, vertical upto 6mtr.
- Experienced engineering capable of co-ordinating large projects (up to € 3 mio).
- Experienced in the assembly and project co-ordination of complex machines.
- Extensive network of sub-contractors.

Industry served

Special machines and apparatus for e.g. Defense, Nucleair, off-shore, food and aviation industry. Supplier of pressure vessels, lifting and towing equipment and amusement rides.

Dries Wiersma
Head Sales

Stedenbaan 15
5121 DP Rijen
T: +31 161 24 47 50
mail@kin-machinebouw.com

www.kin-machinebouw.com

KIN machinebouw

Landes High End Machining

Reliable supply of mechanical parts ready for assembly is the core competence of Landes High End Machining. Landes incorporates 30 years of experience in the manufacturing and on-time delivery of complex and/or accurate components for high end industries. Products are realised by means of CNC-turning, CNC-milling and CNC-measuring. This privately owned business was established in 1985 and has demonstrated consistent growth in turnover and technology development over the years. Landes currently employs approx. 50 employees and is both ISO 9001 and AS-9100C certified.

Capabilities

The capabilities within Landes range from the industrialisation of new components and qualification of manufacturing and outsourcing processes as well as high end machining of titanium (all grades), aluminium and high alloy steels. Manufacturing activities may include special processes like heat treatments, surface treatments, finishing and cleaning with the aim to deliver components that are ready for next higher assembly. The dimensions of Landes in-house manufacturing go up to 1000 x 1000 x 1000 mm. Documentation and traceability are an integral part of the quality management system within Landes.

Products

Structural parts, precision components, turbine components, landing gear components, interior components, frames, housings, limiters, rotation parts, pick- and place components, etc.

Markets

Aircraft- and Space industries, Defence (land systems, naval systems, air bound systems), Semicon industries, Optical industries, Medical equipment, Offshore industries, Special machinery.

References

Fokker, Airbus, Marshall Aerospace, General Electric, Stork, Pratt & Whitney, VDL, Siemens, Fresenius etc.

Certification

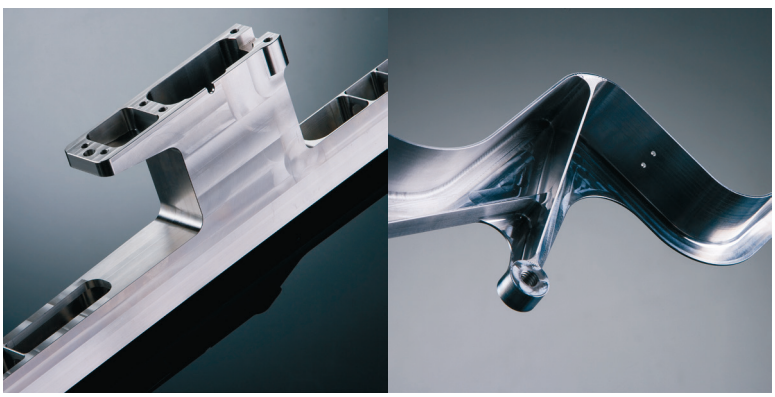
ISO-9001, AS-9100C

Peter Boogaart
Sales Manager Aerospace & Defence

Magelhaenstraat 15
7825 VL Emmen
T: +31 591 63 53 94
Peter.Boogaart@landes.nl

www.landes.nl

Landes
HIGH END MACHINING



Mat-tech B.V.

Mat-tech B.V. is an innovative metallurgical company with a proven track record as interconnection technology supplier. Mat-tech consists of two business units and focuses on research, development and production of high-tech soldering and brazing.

R&D and Production

Mat-tech Development & Testing has specialized in development, optimization and implementation of innovative joining technologies. Various services such as contract R&D (e.g. application and process development), consultancy (process improvement), testing services (reliability) and failure analysis, prototyping and special alloy production are offered. Mat-tech Production offers the opportunity to outsource your high-tech soldering and brazing production, for large series as well as for single pieces.

Mat-tech is servicing a wide variety of industries, a.o. medical, lab equipment, electronics, electronic components, automotive, machine building, process industry, solar industry and aerospace.

Know-how and Equipment

Both extensive know-how as well as in-house equipment are present at our company and through our trusted network.

A wide variety of equipment, such as Scanning Electron Microscopy equipped with Energy Dispersive X-ray Spectroscopy, Optical Microscopy, Meniscograph (Wetting balance) and furnaces for vacuum brazing, inductive soldering, etcetera.

Industrial applications

Mat-tech is servicing multiple industries, such as medical, lab equipment, electronics, electronic components, automotive, machine building, process industry, solar industry and aerospace.

Erik Brom
Technical Commercial Director

Mat-tech Development & Testing
Ekkersrijt 4605
5692 DR Son
T: +31 (0) 499 49 01 33
info@mat-tech.com

www.mat-tech.com

mat-tech
innovative soldering & brazing

MI-Partners

Innovative High-End Mechatronic Solutions

Our company

MI-Partners is your contract R&D partner for the development of high-end mechatronic systems. Offering the complete cycle of predevelopment, design, realization and testing of high-tech systems, MI-Partners can assist you in your development efforts. MI-Partners uses a compact and highly educated team which results in fast solutions that work. Operating in a wide variety of market sectors results in solutions that characterize themselves as fresh, innovative and out-of-the-box. Choosing MI-Partners means choosing for open communication throughout your project, profiting from the mechatronic approach and reaching your goals on time.

Our competences

To assist in developing mechatronic total solutions, MI-Partners has a high level of knowledge of the customary mechatronic disciplines and competences at its disposal:

- Design principles for precision engineering
- (Advanced) motion and equipment control
- Predictive modeling (dynamic/thermal)
- Dynamic error budgeting
- Floor vibration isolation
- Air bearing design
- Design for vacuum/contamination
- Magnetically levitated systems
- Optics

and of course:

- Project management
- Customer focus
- Cost awareness

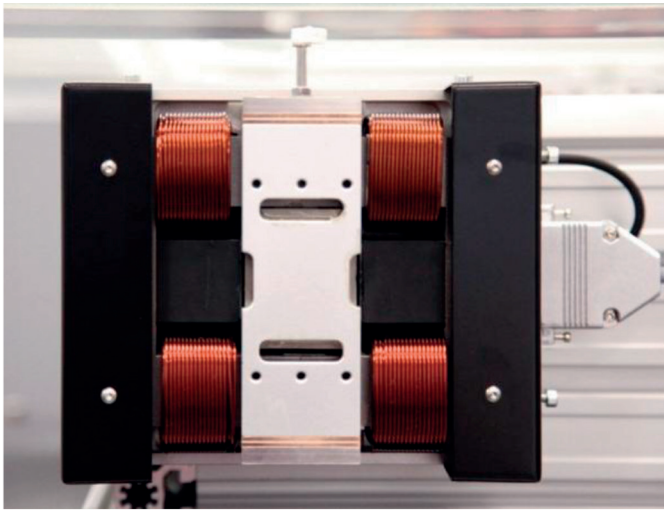
Leo Sanders
Director

Dillenburgstraat 9N
5652 AM Eindhoven
T: +31 402 91 49 26
info@MI-Partners.nl

30 Employees

www.MI-Partners.nl

MI PARTNERS
PARTNERS IN MECHATRONIC INNOVATION



Mogema 3.0
The combination makes the difference

Mogema 3.0 is high-tech expert in welding, machining and vacuum technology. This unique combination of activities is what makes the difference: we are your partner right through from development up to and including delivery of the complete module.
We specialise in complex and large vacuum chambers and vacuum systems. Our expertise in welding, machining and assembly comes into its own for the manufacture of vacuum chambers.

Production techniques

Precision welding

- Wide choice of materials
- Broad range of sizes over 9000 mm
- Specialized production

Advanced machining

- Extreme accuracy to within hundredths of a mm
- Acclimatized production
- Enables highly accurate machining

Critical assembly

- Meeting every need

Our commitment to innovation and our belief in the importance of ongoing development is reflected in our investment in new techniques and expertise, as well as our partnerships with scientists and involvement in academic projects.

Michel Kurstjens
Managing Director Sales

Industrieweg 9
8084 GS 't Harde
T. +31 525 65 15 33
info@mogema.nl

www.mogema.nl

mogema3.0

an Aalberts Industries company

National Instruments

Committed to Engineers and Scientists – Since 1976, National Instruments has equipped engineers and scientists with tools that accelerate productivity, innovation, and discovery. NI's graphical system design approach provides an integrated software and hardware platform that simplifies development of any system that needs measurement and control. Engineers and scientists use this platform from design to production in multiple industries, advanced research, and academia.

Accelerate Development – Researchers accelerate their development using highly productive NI LabVIEW software that integrates and abstracts the complexity of systems at multiple levels, including unprecedented visualization of system timing. They can lower total systems cost, increase flexibility, and integrate new technology easily using off-the-shelf customizable hardware that meets system needs from low power to high performance.

Innovate Fast – The flexibility and scalability of the platform, supported by a growing ecosystem of reusable IP and applications, gives engineers a strong competitive advantage in completing more projects with less time and resources. Thousands of engineers successfully use the NI graphical system design platform today to innovate, discover, and invent their own solutions – fast.

William Baars
Area Sales Manager

Pompmolenlaan 10
3447 GK Woerden
T: +31 348 43 34 66
info.netherlands@ni.com

www.netherlands.ni.com

NATIONAL INSTRUMENTS™

Omics2Image

We offer you the benefits of cutting edge technology developed by the Biomolecular Imaging Mass Spectrometry group of Prof. dr. Ron Heeren at Amolf.
Our customer-focused team consists of scientists and engineers with a vast global experience. We close the gap between innovation at the frontier of science and ready-to-use products for science and industry.

Product Information

With the IonPix camera molecular images are not constructed in a conventional manner point-by-point, but directly detected in the microscope mode.
Inside a mass spectrometer in a 100-200 micrometer area, molecules are isolated, ionized and accelerated with a particle beam or a laser. The new system leaves the spatial distribution of ions intact while they fly through the mass spectrometer. These ionized molecules are detected at the end of the flight tube, where arrival time and location are recorded. With the conventional detectors, this was quite complicated or it simply proved impossible. The camera is based on a chip detector (Timepix) that has been developed for high-energy physics at CERN, for more information see the Medipix Collaboration. This technology produces all molecular images with a single laser flash. Each pixel in such a molecular picture compares to 500 nanometers of tissue, and in one experiment more than 250,000 spectra are simultaneously collected. This is a major improvement in resolution and measurement speed.

The AMOLF group has deployed this new form of molecular photography among others for breast cancer research.

References

Nikhef, NL – AMOLF, NL– Netherlands Proteomics Centre (NPC), NL– Korean Research Institute of Standards and Science (KRISS), South Korea

Dr. H. R. Poolman
CEO

Science Park 105
1098 XG Amsterdam
T: +31 204 70 03 99
info@omics2image.com

3 Employees

www.omics2image.com

Peter Haak Produktontwikkeling

High Performance Sensors and Instrumentation

Product information

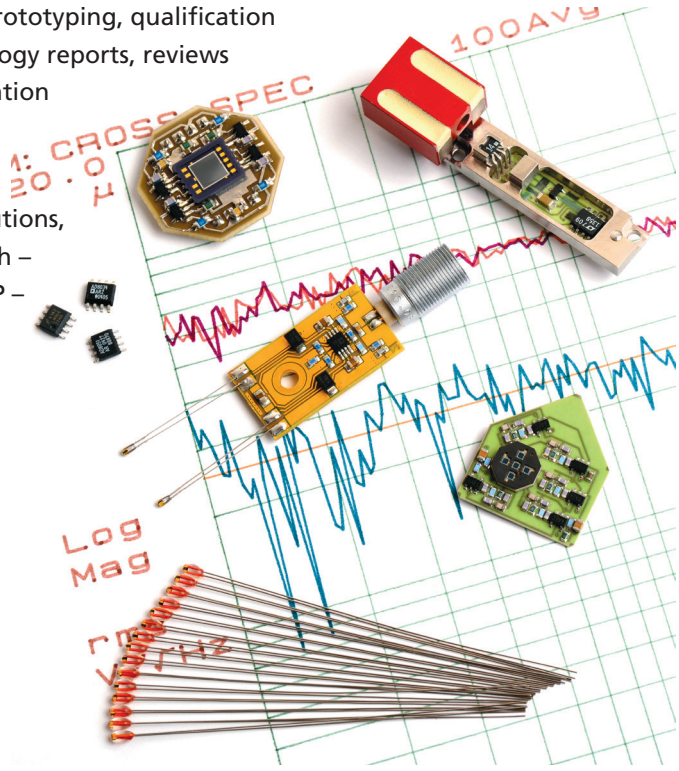
Our core business is the development of high performance sensors and instrumentation for scientific and industrial applications, with over 20 years experience in this field. Our expertise is primarily based in the analog electronics domain, with an emphasis on low frequency and low power. For projects that may require any external expertise, we work with a broad network of specialists, e.g. in the field of physics, data processing algorithms or ASIC design, in order to provide you with an optimal solution.
We spend substantial resources on evaluating new technologies and constantly engage with professionals from neighbouring fields to be prepared for future inquiries. Regular participation in product definition and testing of "early samples" for leading component manufacturers and exchanging the test results and insights, enables us to go "far beyond the datasheet" and push the limits with confidence.
Due to our efficient way of working we can respond quickly to customer requests, and as such we can offer rapid prototyping and notable flexibility when it comes to last minute changes.
Our solutions are used in the semiconductor industry, in scientific research (ultra-precision current measurement, cryogenic reference thermometry), healthcare (EEG, in-vivo measurements) and other sectors. Typical examples include: thermal sensors with µK stability, magnetic and capacitive sensors for sub-µm positioning, highly sensitive hybrid optical detectors, sensors for mHz range noise cancellation.

Core expertise

- high resolution and low noise circuit design: discrete, IC-based or "composite" designs and hybrid circuits
- solutions for signal integrity in a real life environment: think of 1/f noise, popcorn noise, thermal EMF
- extensive knowledge of electronic components, materials and processing, circuits and systems

Services offered

- product development: concepts, analysis, design, prototyping, qualification
- consultancy: component and circuit advice, technology reports, reviews
- training and support with emphasis on implementation



References

From small enterprises to large companies and institutions, including: ASML – CERN – Vistec (Leica) – SKF Research – Philips Healthcare – TNO – Nedap – Heidenhain – NXP – ABB – Shell

Peter Haak
director

Slijpersstraatje 2
5211 NC Den Bosch
T: +31 736 90 14 54
peter.haak@hetnet.nl

peter haak produktontwikkeling

PM-Group

DISCOVER PRECISION

Company Introduction

As a strategic business division of the PM-GROUP we as PM-BEARINGS are highly specialized in designing and manufacturing high precision bearings and advanced motion systems in ultra high quality. We are providing a complete range of linear bearings, frictionless slides, (piëzo)positioning tables and stages, which guarantees high levels of performances at competitive prices. Thanks to almost 50 years history of experience, new findings in research, combined with innovating linear technology, our products meet the highest accuracy and quality demands of today's industry and are successful in use world-wide. As a proud member of the PM-GROUP we are able to realize turn-key projects for our customers starting with design, project management, machining, assembly and after service.

Our activities

As a strategic business division of the PM-GROUP we are a leading company in the development, integration and manufacturing of linear guides, guiding systems, nano-positioning stages and mechatronical [vacuum] modules for several high-tech markets and Synchrotron initiatives.

Reference Projects

Our experience with particle accelerator projects and synchrotron initiatives started all ready a long time ago. We have good contacts towards the synchrotron activities with Brookhaven National Laboratory(BNL), Diamond Light Source(DLS) and the Paul Scherrer Institute(PSI). For many years PM-BEARINGS delivered complex ceramic bearings and they have already find a way to institutes as PSI. Furthermore we have a close relation with the Diamond Light Source(DLS) initiative in Great Britain. For DLS we deliver turn-key advanced beam-alignment modules combined with piëzo stage technology and sub-micron mechatronical integrated modules.

PM-BEARINGS Competences:

Machining of exotic materials (Composites, Glass, Duplex, Hastelloy, Inconel, Nimonics, Invar, AMC, Titanium, Ceramics and Stelliet) – from R&D to Serial production – Electro Chemical Machining (ECM) – FEM Simulation – Algor – CAD/CAM Design – Siemens NX7.5 – High Precision Machinery (sub-micron range) – Cryo Positioning Stages – Vacuum Positioning Stages – Nano Motion control
– Linear technology – Piëzo technology
– Nano-Positioning Systems – Mechatronical high precision modules
– System Integration – Cleanroom facilities ISO class 5-6 (>1000m²)
– Vacuum cleaning – (U)HV and UCV knowledge
– Surface Treatment

Jos Oldereuver
Sales Manager

Galileistraat 2
7701 SK Dedemsvaart
T: +31 523 61 22 58
j.oldereuver@pmbearings.nl

www.pmbearings.nl

Precision Mechanical Production

Precision Mechanical Production is a flexible and innovative supplier, specialized in manufacturing of ultra-precision mechanical components for the High Tech industry.

Competences

- Since its foundation in 1998, PMP works proactively with customers in both the product development and the product realization process.
- Knowledge and Skills at the highest level of;
  - developing product- and process strategy
  - tool design and development
  - CAD/CAM
  - CNC machining
  - Aukom coordinate measuring technology (3D)
- An installed base of the latest machine tools at the forefront of technology;
  - 3-axis (max.2000x800mm) CNC machines
  - 5-axis (max. cube 600mm) CNC machines with loading robot
  - 3D measuring facility.
  - technical climatised production.
- Producing accurate, complex ultra-precision parts, with tolerances in the uM range.
- From prototype, single pieces to small and medium size series.
- Materials; aluminium, titanium and super alloys.
- The active quality assurance policy together with our safeguarded processes and procedures ensure our high quality to be continuously secured.

Markets

Semicon, Analytical, Optical, Medical, Defense and Aerospace.

PMP your "Partner in Precision"

Eric Sens
COO

Mercatorstraat 15a
7131 PW Lichtenvoorde
T: +31 544 37 05 71
eric@pmp-nl.com

www.pmp-nl.com

PMP
Precision Mechanical Production

S&T

Science & Technology (S&T) has more than 10 years experience in the development of data analysis software for both engineering- and science data. S&T's expertise is applied in a wide range of domains, including space and earth observation, astronomy, oil and gas industry, navigation, and high-tech machinery.

Product information

The objective of S&T's data processing software is to extract as much information from sensor data as possible. The data processors systems are used to wide range of applications. These applications include (i) the extraction of scientific information from sensors such as Earth Observation sensors for atmospheric research and telescopes for space research, (ii) to derive an accurate estimation of a system's health so that imminent failures are recognized before they actual take place, (iii) to derive the exact positional information using various navigational sensors.
For System Health Management (SHM) applications S&T has developed the Uptime tool. This tool encapsulates the state-of-the-art SHM technology to avoid unnecessary downtime, alarm rate reduction, fault diagnosis, and the prediction of imminent failures.
Our scientific data expertise focuses on the analysis of large science data-sets, data visualisation, simulation, the development of software-pipe-line systems and calibration algorithms. The S&T expertise focuses on the (pre-) processing and visualisation of raw data and the generation of calibration key-data for level 0-1 and 1-2 data processors. In addition we develop user interfaces that allow quick-access to level 2 science and housekeeping data.

References

System health management for the ESA future launcher rocket propulsion – calibration and data-pipeline activities for the LOFAR radio telescope telescope – ITER NL vacuum leak detection and localization – data quality control toolbox (Quadas) used for ground- and space segments for missions such as SWARM, CroyoSat-2, Galileo, Sentinel-1, Sciamachy – on-ground and in-flight calibration activities for various Earth Observation missions such as OMI, GOME, Sciamachy, and Tropomi.

A. Bos
Director

Olof Palmestraat 14
2616 LR Delft
T: +31 152 62 98 89
bos@stcorp.nl

Turnover: 6 M€ | 80 employees

www.stcorp.nl

s[&]t
dependable solutions

Uptime:
System Health Management
of Complex System

Schelde Exotech

Schelde Exotech offers her clients design, fabrication and testing of high quality and complicated equipment. Schelde Exotech offers a wide range of products of Exotic materials like: Nickel Alloys, Copper Alloys, Cladded Steel, Aluminium, Titanium, Tantalum, Zirconium, etc.

Product information

Schelde Exotech has a rich history, based on last century companies: AKF Goes, Schelde Boiler Division and Schelde MT-Products. Schelde Exotech was founded in 1998 and is a member of the VE Group since 2009.
Schelde Exotech is specialized in the design and manufacturing of 'Special Products'.
Special components – Vacuum systems – Heat exchangers – Reactors – Pressure vessels – Airfin coolers – Gasification burners – Super heaters – Repair and maintenance in Exotech facility – Repair and maintenance at client's site/facility
Schelde Exotech has a fully staffed Design Departement and uses modern design tools like: AutoCad (2D design program); Mechanical Desktop (3D design program); Inventor (3D modeling-design program); PV Elite (ASME Code calculations, PD 5500); Scades (RToD); BabsyWin (EN 13445 Code calculations, AD 2000); Ansys.
Besides special products and services Schelde Exotech is also a reliable partner for repairs and replacement projects. Schelde Exotech has a 24/7 helpdesk when it comes to emergencies. Schelde Exotech will mobilize a repair team at earliest possible convenience, usually available within a few hours.

References

Scientific experiments – Research Institutes / Universities – Nuclear energy – Oil & Gas – Energy – Defence – Particle physics – Chemical and petrochemical industry

Arthur Borsboom
Sales Manager
Jos Mols
Managing Director

Koningsweg 2
4381 NA Vlissingen
T: +31 118 48 59 53 / +31 651 32 76 01
arthur.borsboom@exo.schelde.com

Turnover: € 20.000.000,00 |
100 employees; total capacity 240,000 man-hours

www.exotech.nl

Settels Savenije van Amelsvoort

Research, development and engineering of high tech products and equipment. The core of technology within Settels Savenije van Amelsvoort is mechanical engineering, process modelling and process engineering. Our company has in-depth knowledge of and experience in analyzing, specifying, developing and engineering products, processes and equipment. We are experts in translating the specifications of complex physical processes into working mechanical products. In our Strategic Management consultancy practice, we also audit technology enterprises and/or their departments. We implement and manage (organizational) change to improve their performance.

At Settels Savenije van Amelsvoort group of companies, we believe in continuous learning, communicating and inspiring. We value creativity and accurately describing and understanding things. To achieve this, we create a strong fundamental basis in our expertise: physics, mechanical engineering and control systems engineering. We encourage persistence in explaining the unknown and questioning unfounded decisions. Based on these fundamentals, we develop innovative technology, transforming ideas into functional products. We help people and organizations in their continuous improvement, enabling what was perhaps presumed to be impossible.

John Settels
Director

Anderlechtstraat 17
5628 WB Eindhoven
T: +31 40 851 20 00
grs@sttls.nl

www.sttls.nl

settels savenije
van amelsvoort
TECHNOLOGY - INNOVATION - INSPIRATION

Sumipro

For over 15 years Sumipro supplies high precision optics for customers all over the world. Sumipro advises medical, aerospace and defense industries and designs and produces optical products and systems for them.

Product information

Sumipro realizes custom made solutions for your optical challenges: human contact lenses, optics for night vision systems or reflectors for all kinds of light sources, etc.
Consultancy and design – Sumipro offers innovative solutions in design, engineering and rapid prototyping, choosing the right optical components and creating superior optical systems. Our engineers are specialized in designing aspherical and non rotational-symmetric optic components to achieve systems with high per-formance and less components.
Quality optics – Sumipro develops and manufactures optical components and systems with competitive prices and a very high degree of accuracy. Our inserts have tolerances in focus lengths within 0.1% instead of the typical 1 till 5%.
Mirror optics – Sumipro specializes in aspherical and diffrax surfaces for mirrors. Max. diameter 300 mm, Material: various aluminium alloys,copper, Arcap, or other machinable materials. Applications: Space, Imaging optics and Laser applications.
Specifications for mirrors – Geometries realized: Spherical and aspherical surfaces – Fresnel and diffrax patterns – Off axis mirrors – Parabolas and ellipses.

Form accuracies in general reach PV-values smaller than 350 nm with irregularity beneath 1 fringe (633 nm), depending on material and size.
Coatings – gold, silver, alumimium enhanced or protective (non oxidizing) coatings.
Infra red optics – Sumipro specializes in aspherical and diffrax surfaces for lenses, max. diameters 240 mm, most often realized in germanium, silicon and high purity float zone silicon (HPFZ): Applications:
Night vision – Thermal imaging optics – Space applications
Specifications for IR lenses – Spherical and aspherical surfaces; Fresnel and diffrax patterns; Off axis; Parabolas and ellipses. Form accuracies in general reach PV-values smaller than 350 nm with irregularity beneath 1 fringe (633 nm), depending on material type and size. Roughness values (Ra) typically reach values of 5 nm or less.
Coatings – Lenses are commonly supplied with AR coatings, ranging from 3-5 µm or 8-12 µm or variations. Reflectivity R < 0.5% or even smaller upon request. All IR coatings are compliant with most MIL-specifications. Besides AR we can supply front sides with DLCs

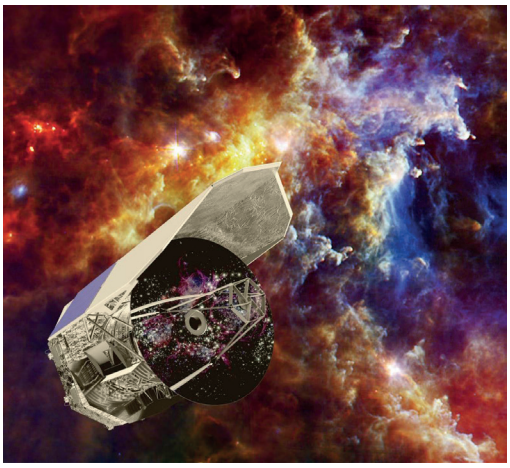
Ben Lubberman
CEO

Bedrijvenpark Twente 323
7602 KL Almelo
T: +31 546 81 51 41
info@sumipro.nl

Turnover: 1.5 M€ | 9 employees

www.sumipro.nl

SUMIPRO bv
Submicron lathing



Technobis Group

Technobis Group is a developer and supplier of high-tech instruments and modules for the most dedicated national and international OEM companies.

Core competencies: photonics, mechatronics, assembly and testing

Technobis Mechatronics: Technobis Mechatronics specializes in complete product development projects, from the initial idea to a successful turnkey product, prototype or series product.

The main scope for which we use our technologies and competences are amongst others the complete turnkey delivery of:

- Inspection / measuring systems
  - Probe manipulators
  - Optical inspection systems
- Handling systems
  - Servo driven manipulators
  - Gripper units suitable for harsh environments, remotely operated
  - Vacuum chuck units suitable for harsh environments, remotely operated
- Design and engineering of graphite, carbon reinforced carbon and other ceramic parts used for the handling of products in a harsh environment.
- Life science instruments
  - Crystallization research
  - Confocal fluorescence microscopy

Technobis Fibre Technologies

Technobis Fibre Technologies specializes in the development and supply of total solutions in high-speed, high-resolution and multi-sensor fibre interrogators and sensors.

Optical fibre sensors find widespread use in a multitude of applications due to their small size, light weight, inertness to chemical substances, ability to withstand high temperatures (~900°C) and immunity to electromagnetic interference. As a result, optical fibre sensors are frequently used for applications such as structural health monitoring, condition based maintenance and other specific sensing applications. Technobis Fibre Technologies current interrogator systems allow resolution levels ranging from 1 picometer down to 2 femtometer wavelength shifts, allowing the user to detect nano strains at speeds up to 80 kHz or higher. This is of great benefit in a large number of highly demanding applications. In order to meet growing demand from the market, Technobis Fibre Technologies has initiated a trajectory to develop Photonic Integrated Circuits for the new generation of interrogators capable of meeting at least the same specifications.

References

ASML – Fei – Airbus – Boeing – NLR – Tata Steel – Vistec – Polytec – IHC – RGS development

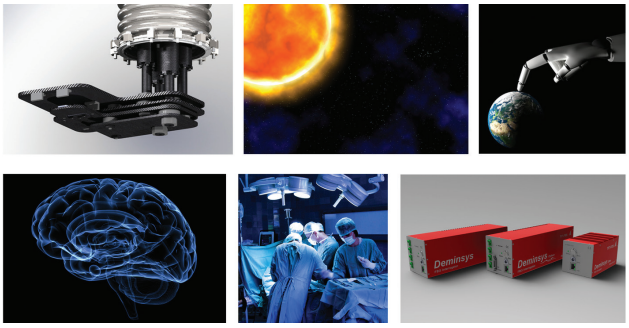
P.L. Kat
CEO

Geesterweg 4b
1911 NB Uitgeest
T: +31 251 24 84 32
info@technobis.nl

25 employees

www.technobis.com
www.tft-fos.com

Technobis Group



TNO

It is TNO's mission to help the advanced Dutch industry in innovating. One of the focus areas of TNO is Big Science with activities in ground based astronomy, nuclear fusion, CERN/CLIC as well as in space instrumentation and other projects.

Product information

TNO provides system architecture, multi-disciplinary (pre)design, alignment plans and execution, calibration plans and execution, and control of high-end opto-mechanical instruments and mechanisms. Realization and delivery of these systems is preferable done with industrial partners, certainly for larger instruments and for series production. Thus, TNO hopes to open new markets for these industries.
The instruments that TNO develops are characterized by picometer stability and sub-nanometer positioning accuracy; often operating in extremely hostile environments with long life time; and where necessary with intelligent image interpretation.
TNO's expertise in (adaptive) optics, mechanical engineering, control, image processing and contamination control enables the development of a wide range of complex instruments and mechanisms. Our flexure or magnetic bearing-based mechanisms have low friction and zero hysteresis. We produce quality optics with low wave-front error from a variety of materials including Aluminium, Fused Silica, Silicon Carbide and Molybdenum. We know how to prevent, monitor and remove contaminants, ensuring long life times. And our abilities to process and interpret images are worldwide unrivalled.

References

For nuclear fusion, TNO developed endoscopes (CXRS, Lidar), a control system for the plasma, contamination control tools and image processing for *in-situ* repair. For ground based astronomy,
TNO has been playing important roles in the ESO programmes VLTI and E-ELT on delay lines, mirror actuation and laser launchers. TNO has developed tools for extreme precise measurements and control on aspherical optical parts and for rapidly finding particles on wafers. TNO's experience in space is applied in HIFI for Herschel, metrology for Gaia, OMI and soon also TROP-OMI and delay lines for Darwin. Important commercial customers of TNO in the field of high-end optomechanics are ASML and Carl Zeiss.

Bart Snijders
Business Development

Stieltjesweg 1
2628 CK Delft
T: +31 152 69 21 80
bart.snijder@tno.nl

Turnover: 494,6 M€ | 4,400 employees

www.tno.nl

TNO innovation for life

Van Halteren BV

Company profile

Van Halteren Special Projects (VHSP) is part of the Van Halteren Group which has the following business activities: High Voltage Products, Defence and Industrial Services. The group is and independent family owned business with production facilities in The Netherlands, Poland and India.

VHSP aims for multidisciplinary projects where competences as advanced heavy machining, certified welding, assembly and commissioning are a requirement. Our production facilities in Bunschoten comprises 12.000 Sqm. equipped with state-of-the-art machinery, a modern construction shop and conditioned measuring facilities. Our staff is motivated, skilled and very experienced.

Markets

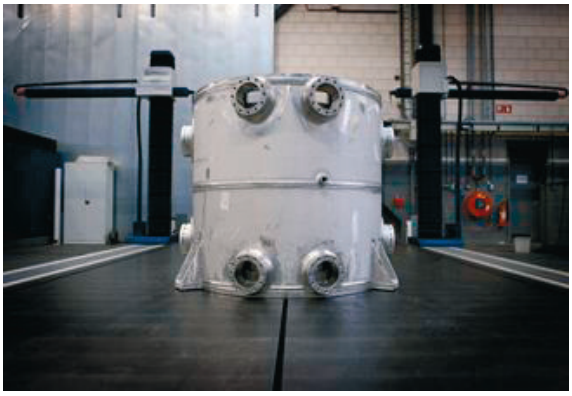
- Offshore
- Oil, gas and mining
- Applied science
- Shipbuilding
- Defence
- Sustainable Energy

Competences

- Advanced heavy maching
- Certified welding
- Project management
- Assembly, Integration & Commissioning
- Engineering
- Measuring up to 6 meter

Products

- Road wheels
- Simulators
- High voltage switches



Izaak Veerman
Managing Director

De Kronkels 27
3752 LM Bunschoten
T: +31 332 99 23 00
info@vanhalteren.com

www.vanhalteren.com

VAN HALTEREN

VDL Enabling Technologies Group

VDL Enabling Technologies Group is a globally operating tier one contract manufacturer of parts, mechatronic modules and systems. VDL ETG focuses on long term / strategic partnerships with its customers.

Product information

VDL ETG provides solutions based on its core competences: Precision Technology, Vacuum, Material Handling, Material Positioning, and Industrialization. This throughout the entire product life cycle: basic research, proto typing, ramp-up, volume, and end-of life.

Products

Mono parts, complex high-end modules, complete (mechatronic) systems.

Markets

VDL ETG serves a number of OEM industry key segments: Semiconductor Equipment, Analytical, Medical, Solar, LED, and Science & Technology.

Science & Technology

VDL ETG is specialized in the (co)development and manufacturing of high precision parts, sub-assy's, complex modules. All products require high / ultra precision turning & milling, high-end metrology, bonding, RF testing, and heat & surface treatments. The defined production strategy determines yield, cycle time, and cost of ownership. Our strength is to rapidly translate highly innovative, complex product designs into tangible products ready to enter small series production. Typical key markets within Science & Technology: accelerator, FEL, aerospace, and instruments.

References

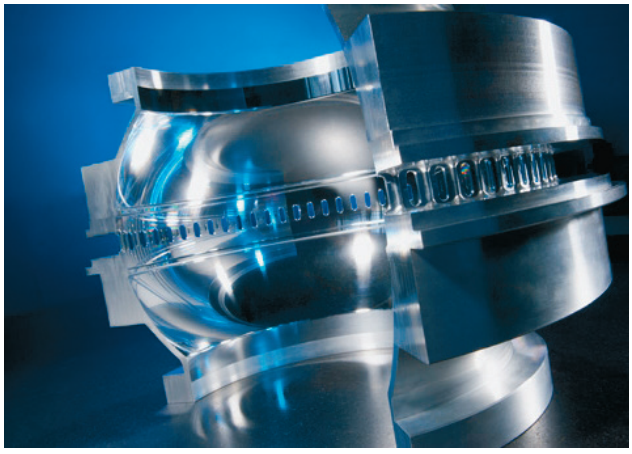
Semiconductor Equipment: ASML, AMAT, KLA Tencor, CymerAnalytical: KLA Tencor, FEI – **Medical**: Philips, Elekta, Waters – **Solar & LED**: AMAT, Veeco – **Mechanization Projects:** P&G, Kellogg's, Bosch – **Science & Technology**: ESO, ESA, ESRF, TNO, PSI, CERN

Hans Priem
Business Manager Science & Technology

Hurksestraat 13
5652 AH Eindhoven
T: +31 653 12 67 09
hans.priem@vdletg.com

Turnover 2011 E500M | 1750 employees

www.vdletg.com



Veenstra Glazenborg

Manufacturer of high precision mechanical equipment. Experience in milling and turning of high grade alloys and pure materials.

Product information

- Sampling probes for natural gas composition measurements (underground application)
- Die cutters for hygiene industry (HSS powder + Tungsten carbide)
- High pressure valves 10000PSI for upstream applications Highlights
- Engineering rotating equipment and production tooling
- 5 axis milling max weight 1200 kg, Machining off solid CAD/CAM
- Milling and turning max weight 5 ton, dimensions 1.00x2.50m
- 4 axis wire eroding and High speed milling max 45000-1 min
- Grinding dept. for moulds and cutting dies
- Certificates: ISO9001:2008 ; G0304 RtoD ; NEN3834

References

SCA – GasUnie – Draka – Philips – Shell – Kernfysisch Versneller Instituut

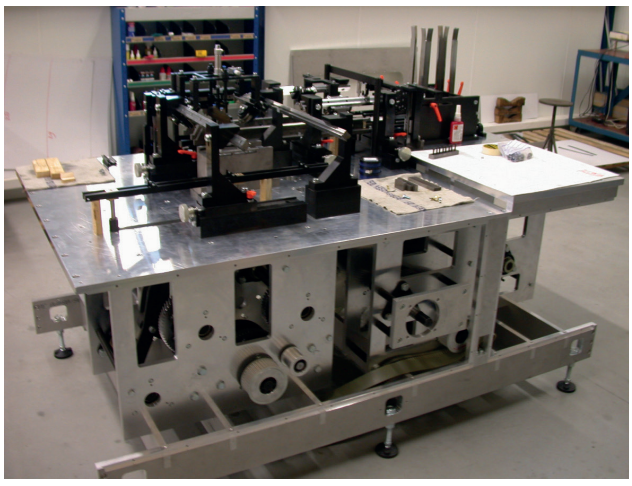
Peter van der Meer
Director of sales

Zeefbaan 29
9672 BN Winschoten
T: +31 597 47 17 70
p.vandermeer@vgnl.eu

Turnover: 4.6 M€ | 38 employees

www.veenstra-glazenborg.nl

Veenstra-Glazenborg



Velmon Lastechniek

Velmon Lastechniek BV is a company for all kind of stainless steel tubes solutions. Many years of experience with cryogen-, food- and pharmacy industries. Assembly and welding in workshop and on site!

Product information

Manufacturing and orbital welding of stainless steel pipe sections and pipe joints. Orbital welding with closed chamber and open weld head, range from ø6mm until ø168.3mm. Series from 1 – 1000+, X-rayed, pressure test, helium leak-tests (max. $1x10^{-9}$ Pa m^3s^{-1}) and oxygen clean treatment. ISO 9001 and ISO EN3834 (under construction) MIG-welding (GMAW), TIG (GTAW) certificated EN287-1 and EN1418.

References

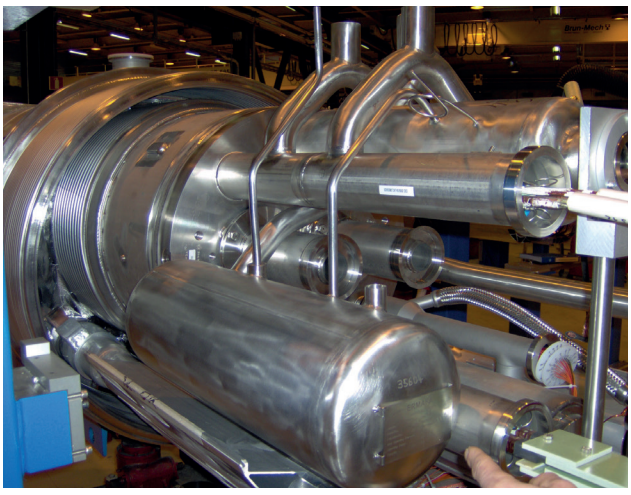
CERN – Corus steel – TEVA Pharmachemie – Trelleborg – Klinger-Picoff – Kenz-Figee – Tekoma – Cofely

Bert van der Velden
Managing director

De Trompet 1121
1967 DA Heemskerk
T: +31 251 20 07 76
lastechniek@velmon.nl

Turnover: Velmon Lastechniek BV1,3 M€ | 10 employees
Turnover: Velmon Group 4,5 M€ | 38 employees

www.velmon.nl



Vernooy

Vernooy is a distinguished specialist in vacuum technology and in developing and manufacturing vacuum parts and equipment.

Product information

Vernooy is specialized in vacuum engineering - process control, from design to final execution. Products are made according to customer's specifications or according to designs by Vernooy's engineers. For more than 60 years, VERNOOY Vacuum Engineering has developed and fabricated high quality vacuum- and vacuum related components for research, semiconductor, display and solar industry.

Vernooy has a balanced and sophisticated machine shop with CNC lathe and milling machines, in combination with TIG- welding and robotic welding. It offers the following capabilities:
– Milling up to 6000mm × 1600mm × 2000mm – Turning swing of 1500mm × 2000mm length – TIG Welding by hand en robot – Vacuum Leak testing – Clean room packing

All activities are executed by highly trained vacuum engineers. Flexibility and quick response are held in high esteem in the company. As a consequence of the great experience in designing, manufacturing, vacuum testing, clean room building and packaging of various vacuum components, Vernooy can be your valuable partner.

References

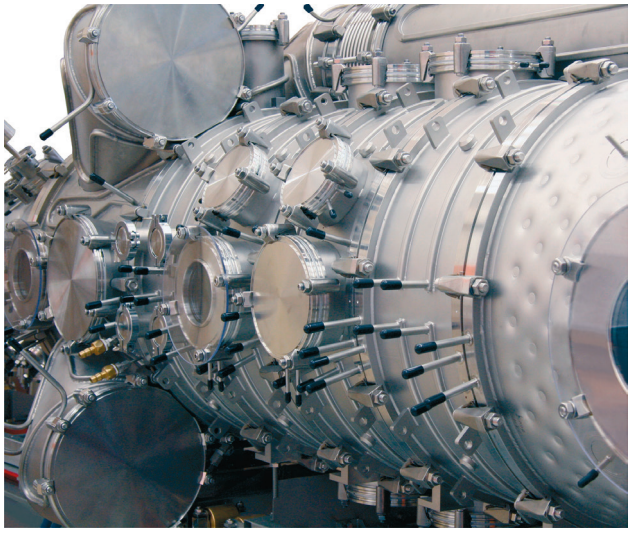
Vernooy realized and completed the delivery of most of the mechanical parts for Magnum-PSI for the FOM-institute DIFFER (the Netherlands). They are completely produced by Vernooy Vacuum Engineering.

Fred Verkerk
Managing director

Archimedesbaan 8
3439 ME Nieuwegein
T: +31 306 03 12 93
verkerk@vernooybv.nl

Turnover Vernooy: 4 M€ | 23 employees
Turnover Triumph Group: 20 M€ | 120 employees

www.vernooybv.nl



Wilting

Wilting is your international partner for the industrialisation and production of high-quality precision components, assemblies, and assembled components. Wilting has been a supplier in the high-tech industry for over 30 years. Our customers are European OEMs that compete globally, Universities and knowledge institutions.

Based on our vast experience in machining Wilting developed into **"Specialists in Manufacturability"**. Therefore, we want to be involved during the engineering phase of your products. In order to be committed during the industrialisation and production of your high precision complex components and/or modules. This enables our customers to focus on innovation & development, and sales & service.

Wilting's Core competences

- **Specialists in high-precision components**
  Outsourcing the production of your high-precision components to Wilting means quality assurance during production and competitive prices due to 24-7 low-manned production.
- **Specialists in assembly and supply chain management**
  Have Wilting take care of your assemblies and supply chain management and you will experience flexibility thanks to project-driven or process-driven assembly (if required in a well-equipped cleanroom).
- **Specialists in value chain management**
  Let Wilting take responsibility of your assembled parts (parts that require a series of different production technologies like milling, welding, brazing, cleaning, etc) and you will benefit from unique innovative solutions through cooperation with a strong network of compatible partners. Furthermore Wilting will engineer an optimal production chain due to a multidisciplinary approach in the process design.

Markets

Semicon Equipment, University and science, Aerospace, Food processing equipment.

Adwin Kannekens
Sales director

Parmentierweg 7
5657 EH Eindhoven
T: +31 631 94 74 09
Adwin.kannekens@wilting.eu

www.wiltingcomponents.com/nl/

ILO's for Big Science

Name ILO / Affiliation	Email	Facility / organisation	Theme
Eric W. Boom	ericboom@upcmail.nl		
Toon Verhoeven (FOM-DIFFER/ITER NL)	A.G.A.Verhoeven@differ.nl	ITER (F4E) – FR JET (EFDA) – UK Asdex-U – DE Wendelstein-7X – DE IFMIF (IEA)	Fusion facilities
Rob Klöpping (FOM-Nikhef)	klopping@nikhef.nl	CERN – CH ESRF – CH ESS – SE ILL – FR EMBL – DE DESY – DE Neutrino Telescopen	Accelerator, neutron and X-ray facilities
Wilfried Boland (NOVA + ESO)	boland@strw.leidenuniv.nl	E-ELT ALMA	Optical telescopes
Emiel van der Graaf (KVI)	vandergraaf@kvi.nl	ZFEL – NL, Groningen XFEL – DE	Free electron laser facilities
Ronald Halfwerk (ASTRON)	Halfwerk@astron.nl	LOFAR – NL SKA	Radio Telescopes
Gerard Cornet (SRON en NSO) **Paul Hieltjes**	G.Cornet@sron.nl P.J.Hieltjes@sron.nl	ESA ruimtemissies	Space observation satellites
Daniel van Beekhuizen (NSO)	d.vanbeekhuizen@spaceoffice.nl	NSO	Space
Alex Schoenmakers a.i. (NRG)	schoenmakers@nrg.eu	Pallas	Pallas reactor, medical isotope production and energy
Martin van Breukelen (HFML)	M.vanBreukelen@science.ru.nl	HFML – NL, Nijmegen EMFL – NL, FR, DE	Magnets with ultrahigh fields
Walther Lenting (NIOZ)	Walther.Lenting@nioz.nl		Coastal and Marine Research (including deep sea research and technology)
Rob van der Mei (CWI)	R.D.van.der.Mei@cwi.nl		National research institute for mathematics and computer science in the Netherlands