"A broad range of activity means opportunities for all kinds of business"

Holland@CERN

6-7 February 2018
CERN, Geneva, Switzerland

High Luminosity LHC

CERN

Holland@CERN 2018

Since the inception of CERN as one of the founding Member states and since providing the first General Director of CERN, The Netherlands have continuously been closely involved in the developments at CERN. Scientists an Research Technicians as well as the Dutch Industry have contributed to the construction of numerous experiments and benefitted from the results for many years.

With the construction phase of the High luminosity LHC-project ramping up and a significant number of other projects ongoing, this provides a new opportunity for our high-tech companies to do business with CERN. This booklet presents many companies, which are active in the High-Tech domain in our country. Many of the firms presented have done business with CERN for many years but some of them are new to CERN but very eager to cooperate and provide know-how in the purchasing of equipment for CERN projects.

For Holland@CERN 2018, we aim to link the visiting companies to familiar and new faces at CERN and find matches between the needs of CERN and the competences of Dutch industry. The programme provides presentations from CERN on the upcoming projects and visits to a number of labs, but most importantly many CERN-to-business meetings to find those matches that result in CERN getting the equipment to meet their challenges.

Looking forward, we invite you to come to the Precision Fair in Veldhoven, which has become a regular event for CERN delegations who come to Holland every year to meet more than 250 companies.

Amsterdam, January 2018

Dr. Jan Visser
Dutch Industrial Liaison Officer CERN
Netherlands Organisation for Scientific Research (NWO)
Science Park 105
1098 XG Amsterdam
The Netherlands
T:+31 (0)6 21 29 16 61
E: jan.visser@nikhef.nl
W: www.nikhef.nl

The Dutch ILO-Network

Science and technology have been changing the world significantly in our life time. Often in a way we couldn't have imagined. Imagination, curiosity and perseverance are the leading (f)actors on this playground.

Big Science is the playground where scientists and engineers get together and stimulate each other to great heights. Scientific questions demand the utmost of technology to push the frontiers of our knowledge. And the answers lead to new questions which are even more challenging. This continuous drive determines the activities of the institutes under the umbrella of the Netherlands Organisation of Scientific Research (NWO). These institutes represent an invaluable asset of the Dutch science practice. Ultimately they also lead the way to innovation; in space, medical, ICT, etc., we all know the examples.
But industry is also invaluable in keeping the cycle running. There is an increasing demand to develop the complex technology that is required. And industry wants to be involved, not primarily for making short term profits, but to exploit the opportunities to increase or improve existing expertise, to be able to introduce new technologies in existing markets, or to penetrate new domestic or foreign markets. This is not without risk, it requires vision and courage to invest, failure is an option, but the gain can be high. Government support can help to alleviate the risks, and only then Big Science can thrive, even in a relatively small country as the Netherlands.
As Rob Klopping, my predecessor, was mentioning in this preface a few years ago, the Netherlands have been investing in many Big Science programs already with great success. The continuation of these successes is not obvious. Big Science facilities are increasingly expensive and only an international collaboration of member states can build and exploit these facilities. Tendering for Big Science contracts is another issue; a large variety of skills is required, as well as a high level of confidence between scientists and engineers. Large companies are often experienced in international collaboration and can maintain the skills that are required to operate in these collaborations. This is not always the case for smaller companies. The network of Industrial Liaison Officers (ILO's) can support the companies in their efforts to earn contracts from Big Science facilities. Usually every facility has an ILO in each member state, who can establish and maintain the bridge between the facility and national industry. In this role the ILO's also help to create business from the (geo)return on Dutch investments in Big Science facilities.
The Netherlands Organisation for Scientific Research (NWO) is providing most of the funding for scientific research and is also supporting the network of Dutch ILO's for Big Science. They jointly distribute the information about Calls for Tender and they can support the companies in their efforts for tendering. This brochure for instance will be distributed amongst scientists and foreign companies to promote Dutch companies. Furthermore ILO's are organising many events where science and business meet, maintain relations with industry and unite government authorities with Big Science and Dutch industry in a collaboration that is known as the "Golden Triangle".

February 2018

Gerard Cornet
ILO-Net Coordinator
Sarbonnelaan 2, 3584 CA, Utrecht
T: (+31)0 88 777 57 02
E: G.Cornet@sron.nl

www.bigscience.nl

Netherlands Organisation for Scientific Research

Dutch Scientific

Contents

02
Electrical engineering and magnets

02 Electrical engineering and magnets	Company size	Speciality (USP)			Area							service		supply						
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
TechMasters BV	S	industrial products, tooling, mechanisation	02; 0207	development; engineering; subcontracting			x		x			x					x	x		
Tebulo Engineering BV	M	multi disciplinary mecha/ electric projects	02; 0207; 03; 05; 09	engineering; production			x			An/ Dig/ Power	x	x			x		x	x	x	
VIRO	L	multi disciplinary mecha/ electric projects	02; 0207; 03; 05; 09	systems engineering; FEM analysis; projects			x					x	x				x	x		
CAPABLE BV	S	cables & connectors	0205;	unique custom specific development										x		x	x	x		
Romal.com	S	Wire, cable & connectors supply	0205;	of the shelf cables, short delivery time from stock																
Steered Technology	S	electric & optic interconnec-tion systems	0205; 030204; 0303; 0804	development of cable assys; fibers; foils; con-nectors						x				x	x		x	x	x	x
MCAP Cable & Glassfiber assemblies		high-grade copper, fiber cables and modules	020505;	design/assembly optical, copper combined with tubes						x					x		x	x	x	

TechMasters BV

About TechMasters b.v.
With many years of experience in the fields of development & engineering of industrial products, test-/ calibration equipment and mechanization/ tooling, TechMasters has been appeared a valueable partner for the industry.

Our company
We are pur sang mechanical/ mechatronical developers/ engineers with a broad experience. We can act from idea up to and including delivery but also for assistance/ sub contracting in projects like (re)design, (value)engineering.

Core competences
- Precision technology
- Fine mechanics
- Vacuum & Medical technology
- Robotics & Mechatronics

Markets
- Analytical & Medical
- Science & Technology
- Semicon
- Research institutes
- Aerospace

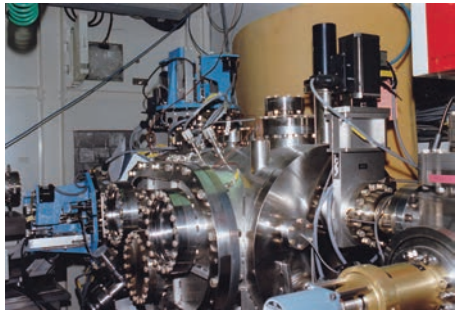
References
VSL/NMi – Shell – MAPPER – KROHNE – ESA/ESTEC – Fokker – TNO

Aad van Loon
CEO/dga

Noordkade 64B
2741 EZ Waddinxveen
T: +31 (0)182 63 15 31
M: +31 (0)6 24 80 78 74
E: avl@Techmasters.nl

www.techmasters.nl

TECHMASTERS



Tebulo Engineering BV

Engineering is the main activity of the Tebulo organization. Of the many projects which have been realized by Tebulo Engineering each year, approximately 80% is primarily engineering for the industry where innovation, development, improvement and creativity are key words.

With our engineering activities we serve the Steel-industry, Chemical and Petrochemical, Food, Public utilities, Energy companies, Nuclear-, Pharmaceutical- and the Automotive industry.

The projects relate mostly front-end engineering projects. However, parts thereof, such as studies, risk assessments, basic and detail engineering are important activities.

The projects are multi- or single disciplinary, where mechanical – and electrical engineering play a primary role. Obviously, civil and structural, Energy distribution (medium – and low voltage) Control technology, Measurement and control and Instrumentation as well as Installation technology have a share in our activities.

Beside our own control philosophy, programs are written for different manufacturer control systems and robots.

Within our engineering department Turn-Key projects, where complete mechanization is developed and supplied, are of great importance. Our marking -, strapping – and de-strapping machines, which are supplied worldwide, are also part of our engineering activities.

The project-based approach ensures that projects are completed smoothly, with just 'timed' turn to the right disciplines.

Tebulo Engineering stands for:

"Technical experts driven by engineering".

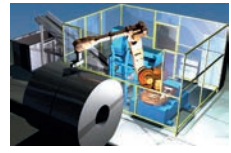
John van Stek
Werving & selectie/business development

James Wattstraat 25
1817 DC Alkmaar
T: +31 (0)725 71 80 83
E: John.van.Stek@tebulo.com

www.tebulo.com

TEBULO
Technische Experts gedreven door Engineering






VIRO

VIRO for full scale engineering solutions

VIRO is a Dutch, private owned international engineering company with +600 FTE and offices in the Netherlands, Germany and Austria. We develop complex high-tech machinery and (chemical) plants for major international companies.

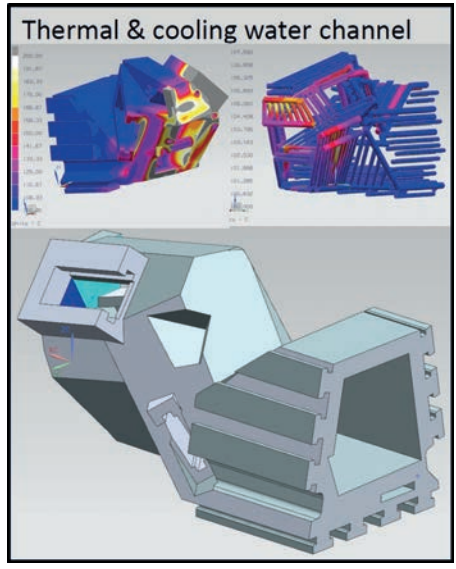
Specific expertise

- Mechanical engineering
- Engineering analysis
- Multi-disciplinary projects
- Project management
- Systems engineering

Design tools: Catia (V4 and V5), Inventor, Unigraphix NX, Pro/E, AutoCAD, and others
Analysis tools: MSC.Patran& MSC.Nastran, FEMAP, ANSYS, I-Deas, NX advanced Flow and Simulations, and others
Customers include: ASML, NXP, DAF, Airbus, MAPPER, Astron for which we design anything ranging from modules to complete machines including project management.
Quality: NEN-EN-ISO 9001:2008 and VCA++

Reference projects

- ITER NL concept design front dynamic shield module (see image)
- Vacuum chamber design (> 2 m^3) for a semiconductor company
- Various high precision verification / test / integration machines and tools including procedures for assembly; verification and operation.
- Development of "Glass". This system is used as a laser beacon to correct atmospheric interference on the WHT (William Herschel Telescope)
- Many other high tech and multi-disciplinary projects



Ir. Tijs Teepen
Projectmanager High Tech systems

Admiraal Lucashof 7b
3115 HM Schiedam
T: +31 (010 409 26 00
E: T.Teepen@VIRO.nl

www.VIRO.nl

VIRO
the performance of technology

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
E: info@capable.nl

www.capable.nl

capable
create your connection

ROMAL.COM

Romal is a technical wholesaler from Utrecht in the centre of the Netherlands. Our company was founded in 1932 and remains a family owned business even today. Our focus is on the business to business market. With our broad range of products we target the Broadcast, Data/Telecom, Catv/ Satellite, Security, Coil winding, Isolation, Industrial and Installation markets.

Quality

If there's one thing our wide range of products have in common it's quality. We are constantly looking for the best products to fulfil our customer needs and further complete our product range. Therefore we have a strong product range with excellent products and reliable suppliers who stand behind their products a complete 100%.

Stock and Vision

We hold more than 2.000 different products on stock to have a quick and reliable order fulfilment time. With our active stock policy we try to keep our stock as current as possible. This also means that we add new products on a regular basis.
Next to quality we see that lead time is becoming more and more important for our customers. It's part of our company vision to have a large stock position. This may not seem as the most logical thing for a business economist but over last 80 years it proved to be an important trademark for Romal.
Many of our customers thrive to keep their stock positions as low as possible. This is only possible if they have a reliable partner with a good stock position. Romal is that reliable partner. And in case we don't have stock we can guarantee a quick delivery because of our broad range of suppliers.

Product management

Our product manager continues to look for new products or combinations of existing products. This can be cable assemblies but also customer specific cable, which we can deliver in small batches if needed. We also have a number of product specialists who can advise our customer and handle their specific needs professionally.

Sjoerd van Velzen
Accountmanager

Verlengde Hoogravenseweg 223
3523 KJ Utrecht
T: +31 (0)30 289 71 61

E: Sjoerd.van.velzen@romal.com

www.romal.com

ROMAL.COM

SteeRED Technology

Connecting the dots to make your system work!

steeRED Technology, founded by experienced industry professionals, is an interconnection system development and supply company. We use internal resources as well as the capabilities and resources of our partners to make new developments possible and to maximize productivity for our customers.

Our Technologies:

- Connectors and other interconnection components.
- Copper cable assemblies
- Foil & Flex based interconnect solutions.
- Fibre Optic cable assemblies and subsystems.
- High Speed copper cable assemblies
- Solutions for verification and characterisation testing.

Our team has over 80 years of experience with developing and selling interconnection systems. In 's-Hertogenbosch we do have our engineering, prototyping and testing capabilities and we also work together with carefully selected partners to have access to those technologies which can make the difference for the value we want to bring to our customers.

Theo Hooft
Business Development

Siloweg 618
5222 BM 's-Hertogenbosch
T: +31(0)73 689 99 69
E: theohooft@steeredtechnology.com

steeredtechnology.com

STEERED Technology

MCAP Cable & Glassfiber assemblies

MCAP is the specialist for designing and assembling high-grade copper cables, fiber optic cables and modules. They are used in various industries and markets. From milking robot to electronic sphygmomanometer and professional video camera to underwater telescope. Always thought out well and reliable.

Cable assembling

The optimum cable assembly, focusing on your specific application. With optical fibers, copper or combined with tubes for air, water or oil. We design for you or build according to your drawing. Whatever you want, we make your connection.

System modules

From loose components to a sub-assembly, or an end product. MCAP builds modules or devices in small to medium runs where quality and reliability come first and the delivery time will be no discussion. Assemblies you can rely on.

Extraordinary project

Nikhef develops a super-telescope that detects neutrino particles from distant astrophysical sources such as supernovae, gamma ray bursters or colliding stars. KM3NeT consists of a network of cables and spheres with detectors and has a size of over one cubic kilometre.

Special cables

For KM3NeT we developed tubes of 40 meters in length with power cables and optical fibers. These tubes are linked together to long cables between glass spheres with sensors, so called Digital Optical Modules. The tubes are filled with oil to withstand high pressure at a depth of 3 to 5 km in the Mediterranean Sea.
These kind of challenges we like to enter, because where others say something is impossible, MCAP continues.

Martin van Aperloo
Owner/Director

Bliek 16-18
4941 SG Raamsdonksveer
T: +31 (0)162 51 82 08
E: info@mcap.nl

www.mcap.nl

MCAP
CABLE & GLASSFIBER ASSEMBLIES BV

0207
Automation

0207 Automation	Company size	Speciality (USP)			Area							service	supply						
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
EKB	S	production and process automation	0207;	system integration			x			x	x		x	x	x		x	x		
Q-sys	s	motion control & positioning systems	0207;	custumized engineering & manufacturing			x			x	x				x		x	x	x	
Heinmade	L	piezo actuators, drivers and controls	0207; 0209; 0210	cutom designed motion control systems			x			x	x		x	x				x	x	
Prodrive Technologies	S	powerconversion ;motion control ;vision	0207; 0210; 0305; 0405 ;07	in house production of all components			x			power supplies	data pro-cessing				x		x	x	x	x
Xpress Precision Engineering BV	s	ultra precision metrology & engineering	0207; 03; 05900303; 09	CMM probes; nano CMMs; nano engineering service			x										x		x	x
INCAA Computers	S	electronic equipment/turnkey systems	0207; 0305; 035002; 0210	customised systems; data acquisition; power						automa-tion	embedded				x		x	x	x	
S&T	L	data analysis software	0207; 0350; 04	simulation, monitoring & analisys system health						x	Modelling				x		x	x		x
National Instruments	S	graphical tool for system development	0207; 0350; 040509	Labview; I/O-hardware; controllers						x	x			x			x			x
Technobis Group	V	suppl. high tech instruments and modules	0207; 05; 06; 08	turnkey projects; proto; serie; exotic material; fibre			x		x			x					x	x	x	
DotX Control Solutions BV		electronic controls	020701; 03	simulation, measuring and control						x	x						x	x		

EKB

EKB is a system integrator for industrial automation projects. EKB provides automation solutions within the process and manufacturing industry with over 200 committed and qualified employees. A high quality system according to CSIA-regulations and thorough project management, makes EKB a reliable partner.

EKB was founded in 1971 and has developed into a nationwide operating and well-reputed industrial automation company located at four places; Beverwijk, Drachten, Bunnik and Someren. EKB is also member of the listed TKH Group, an international operating group of companies in the field of Telecom, Building and Industrial Solutions making an annual turnover of more than 1 billion euro.

EKB is synonymous with product and process automation.

Marcel van Deursen
Commercial Manager

Lage Akkerweg 17
5711 DD Someren
T: +31 (0)493 49 66 65
E: someren@ekb.nl

210 employees

www.ekb.nl

Q-Sys

"Q-Sys offers a unique service to motion system users. Whether your requirement is for a single system for research or development work or you are looking for a supplier of series production motion platforms, you have found the only partner you need. With its extensive experience in the specification, design and build of motion and positioning equipment, Q-Sys can take your basic outline or well defined specification and produce exactly the system you require, instead of trying to force an off-the-shelf product to fit your needs. The motion systems we produce use the very latest technologies to ensure performance to your exact needs, be it accurate motion control, precise positioning, stability, etc.

Q-Sys systems have applications in many varied industries and in every application there are a number of key measurables that defi ne system performance. These include geometric and positional accuracy, acceleration and velocity and, some times most importantly, system eigenfrequencies and bandwidth. By a combination of detailed design, modern CAD tools and experience, Q-Sys offers systems that precisely meet the requirements of the given application in a cost effective and timely manner.
As a manufacturer of systems rather than components, Q-Sys is able to pull together the very best hardware available, including motors, encoders, bearings, drive amplifiers and multi -axis motion controllers. At all stages of the design and build process, Q-Sys engineers can work as closely with you as you require. From the initial concept discussions, through feasibility study, CAD design and on to system build and test, your involvement is encouraged. This will take the form of regular discussions, design reviews and sign-offs and even witnessed acceptance tests to validate system performance to the quoted specification.

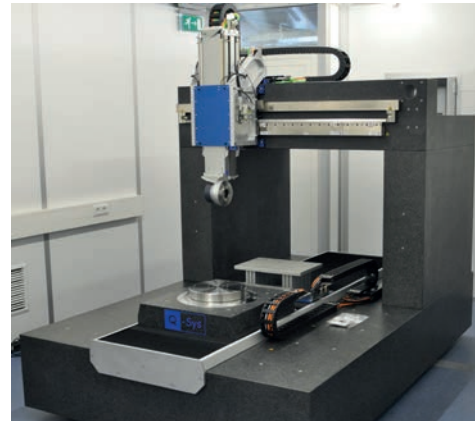
As an added service to customers, Q-Sys is able to off er complete turnkey system solutions. This provides a motion platform configured as part of an overall package, that may include, for example, a laser source for welding, scribing or cutting, a safety or controlled environment enclosure, integration to existing inhouse systems, etc. In these cases the overall system is designed with safety and CE conformity in mind and is delivered, installed and commissioned with full certification. This method ensures your process is up and running far quicker than normal and with minimal impact on your own internal resources.

Finally, Q-Sys offers a comprehensive technical support service for many types of motion systems, ranging from telephone support, through system service and repair, to scheduled preventative maintenance contracts for production systems where availability and reliability are paramount."

Henry Over
Managing Director

Grasbeemd 15-B
5705 DE Helmond
T: +31 (0)492 71 44 34
M: +31 (0)6 15 83 78 71
E: h.over@q-sys.eu

www.q-sys.eu



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

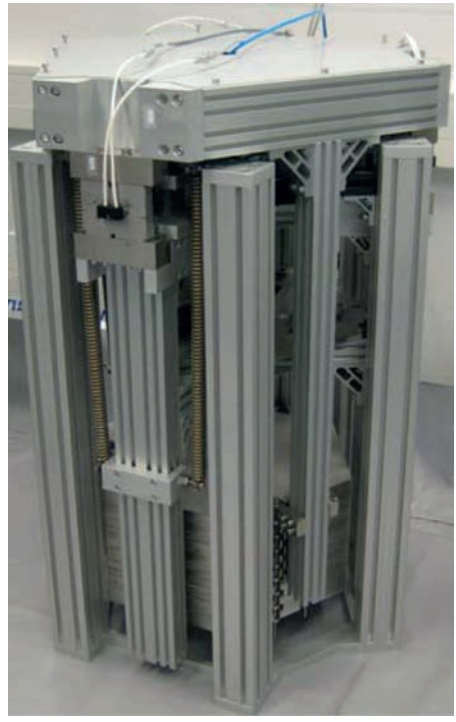
Through collaboration with Noliac (DK), Nanomotion (Isr) and Piezomechanik (DE), HEINMADE offers a wide portfolio of standard products and system solutions. Over the years HEINMADE has extended this portfolio with developed custom made designs to meet the high demanding requirements of the high tech 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 (0)408 51 21 80
E: hein.schellens@heinmade.com

Turnover: 1.0 M€ | 7 employees

www.heinmade.com

HEINMADE
supplier piezo ceramic solutions

Prodrive Technologies

A passion for technology

Quite literally everything centers on the customer, our passion for technology, and on constantly improving our business processes. This 'DNA' has been crucial to our company since we began operating in 1993 and it's the foundation of our success as well as that of our clients. Working for – and usually in close partnership with – you, we develop and produce electronic and mechatronic products and systems with an exceptional price-performance ratio. We can do this because we have smart ways of optimizing, integrating and robotizing, and because we produce everything we need in-house. These are just some of the reasons why we've been able to build a competitive edge over all other providers of technical solutions, anywhere in the world.

Relevant technologies

- *High end computing:* We serve various markets with a focus on real-time / lossless data processing where we can provide processing, storage, communication interfaces and complete computing platforms (filled cabinet), including sophisticated software.
- *Power conversion:* Power conversion is at the root of Prodrive Technologies. For over 20 years, we develop and manufacture power solutions for the Industrial, Medical, Automotive and Energy & Infrastructure markets. We provide off-the-shelf power components, power modules and power systems as well as customer specific solutions tailored to your needs.
- *Vision and sensing:* Prodrive Technologies is one of the few vision & sensing solution providers with the capability and know-how to provide you complete opto-electronic solutions. We support different types of sensors, amongst others: visual (area and line, hyperspectral), infrared, x-ray, radar, particles. Furthermore, all types of digital communication interfaces and processing are readily available.
- *Motion & mechatronics:* Our solutions are unmatched in the combination of electronics, motion control, electro magnetics and precision mechanics, and are applied e.g. in the semiconductor industry.

Wouter van Gennip
Sales manager

Science Park Eindhoven 5501
5692 EM Son
T: +31 (0)402 67 62 00
F: +31 (0)402 67 62 01
M: +31 (0)646 85 88 41
E: contact@prodrive-technologies.com
E: Wouter.van.gennip@prodrive-technologies.com

www.prodrive-technologies.com

PRODRIVE TECHNOLOGIES

Xpress Precision Engineering BV

Xpress Precision Engineering develops and commercializes ultra-precision metrology solutions. Our core business consists of two product lines.

First, we develop and sell products for precision coordinate metrology. This includes 3D tactile probes, controllers and nano CMMs. Secondly, we offer ultra-precision engineering services where we develop solutions for a wide range of customers, e.g. (metrology) institutes, universities, high-tech industry and manufacturers of metrology equipment. Projects usually are a combination of precision engineering and metrology / sensors / measurements.

Ultra precision metrology solutions

A good example of our capabilities is our TriNano coordinate measuring machine (CMM). The N100 model achieves a repeatability of 2,4 nm and a volumetric 3D uncertainty of 100 nm, making it one of the most accurate 3D metrology tools available. The innovative design results in a cost-efficient and highly stable machine that is capable of high speed scanning measurements. This makes TriNano the first nano CMM that is ready for industrial applications.

Furthermore, we offer various 3D scanning tactile probes. Our flagship probe, the Gannen-XP, has a 2 nm repeatability in any direction and a combined 3D uncertainty of 50nm, which makes it the most accurate 3D probe on the market. Additionally, Gannen probes can measure with spheres as small as 50 micrometer in diameter and can achieve micro Newton probing forces. The latter enables a user to measure even soft materials in true 3D without damaging them. All our probes are compatible with various CMM brands.

Ultra precision engineering services

Xpress provides advanced design and engineering services related to metrology and high-precision positioning for our customers. Customers range from global companies to start-ups and small businesses. We solve your challenge, from initial concept to prototyping, calibration and turn-key delivery.

We are specialized in: metrological design, precision mechatronics, kinematic design, opto-mechanical design and controller design.

Ernst Treffers
Director Business Development

Horsten 1
5612AX Eindhoven
T: +31 (0)402 36 61 60
E: ernst.treffers@xpresspe.com

www.XpressPE.com

XPRESS
Precision Engineering

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.

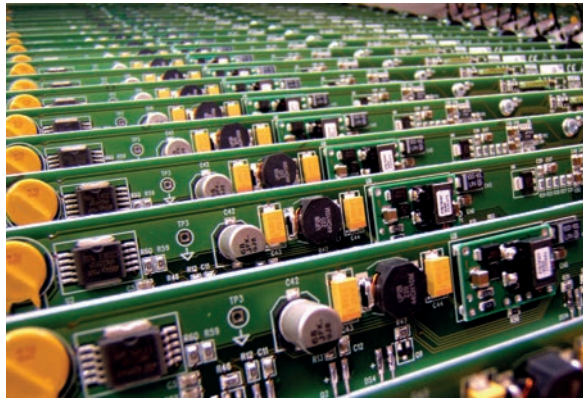
Product information

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



Bart Sijbrandij
Project manager

Puttenstein 20
7339 BD Apeldoorn
T: +31 (0)555 42 50 01
E: sales@incaacomputers.com

20 employees

www.incaacomputers.com

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 (0)152 62 98 89
E: bos@stcorp.nl
Turnover: 6 M€ | 80 employees

Uptime:
System Health Management of Complex System

www.stcorp.nl

s[&]t
dependable solutions

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 eco-system 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 (0)348 43 34 66
E: info.netherlands@ni.com

www.netherlands.ni.com

NATIONAL INSTRUMENTS

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

Pim L. Kat
CEO

Geesterweg 4b
1911 NB Uitgeest
T: +31 (0)251 24 84 32
E: info@technobis.nl
25 employees

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

Technobis Group

DotX Control Solutions BV

DotX Control Solutions specialises in high performance control system development and the realisation thereof. It develops control solutions for complex industrial challenges and scientific research projects.

Product information

One of the DotX main products is the DotX Nonlinear Predictive Controller (DNPC); this controller allows extremely accurate control, due to its ability to simulate and optimise complex nonlinear dynamical systems on-line in a stable and fast manner. This controller has applications in various processes (furnace control, temperature control) and mechanical systems (wind turbines).

Specific expertise includes

- Development of high performance control solutions including NMPC, H_inf, and ILC
- Control-oriented modelling of complex systems
- Observer design for high performance controllers
- Development of advanced model based fault detection
- Integration of commercial control software systems in real-time environments and simulation environments

References

ECN – Tata Steel – ISPT – 2B Energy – EWT – STX – DSM – VDL Weweler – Mitsubishi

Dr. Ir. J. Schuurmans
Director

James Wattstraat 23
1817 DC Alkmaar
T: +31 (0)6 18 96 65 95
E: j.schuurmans@dotxcontrol.com

Turnover: 0.2 M€ | 3 employees

www.dotxcontrol.com

0209
Motors

0210
Power supplies

0209 Motors; 0210 Power supplies	Company size	Speciality (USP)			Area							service	supply						
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
Advanced Electromag-netics BV	S	magnets, motors, actuators	0209; 0225; 03	electro mechanical automation			x			x	x		x	x	x		x	x	x	x
MTSA Technopower	M	high power swiches; process equipmnt	0210; 03; 02; 09	turnkey systems; onsite service; customer specific			x			Power								x	x	x
Wijdeven Group		high end magnets for motion and power	0225;	development; coilwinding; permanent magnets													x	x		
Goudsmit Magnetics Group	V	Magnets and Magnetic Systems	02250105;	Permanent magnets								x	x	x			x	x	x	x

Advanced Electromagnetics

Company profile

The AE-GROUP has more than 75 years experience with the manufacturing and distribution of electrical motors and actuators, ranging from greenhouses to military, automotive and aerospace applications. We are a technological center with in-house experienced specialists in all relevant domains (from simulation to manufacturing, from electromagnetics to fluid mechanics and from training to auditing and grant proposals) which take advantage of dedicated analysis and design software tools.

Products

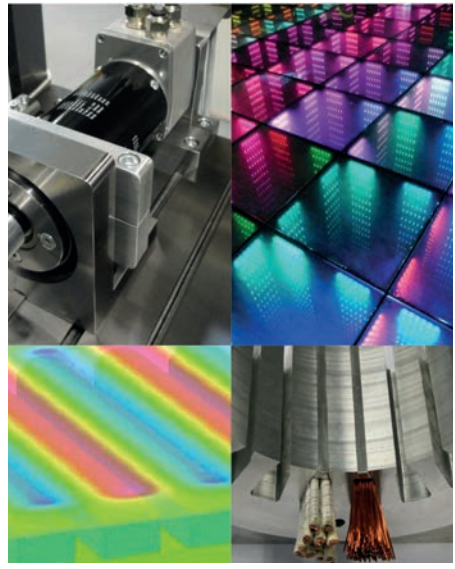
- *Electrical motors and generators:* a broad range from general to servo-drives or traction applications, from standard frame sizes and models to custom designed electrical machines
- *Test-benches for electrical motors and systems:* computer controlled test-stands for electrical machines and drive systems (features: adjustable mounting platforms, integrated power analyzer, graphical user interface, various types of sensors, programmable load curves)
- *Magnet assemblies and magnetic materials:* design, analysis and/or manufacturing of custom magnet assemblies, permanent magnet rotors/translators for electrical machines
- *Electrical motor components:* off-the-shelf or custom made coils and windings, lamination stacks, permanent magnets, insulation materials, brushes and brush-holders, etc.

Services

- *R&D and technical consultancy:* the in-house know-how and a close cooperation with selected partners enables us to provide expert consultancy concerning the electromagnetic, mechanical, thermal, power conversion and control aspects of complex electromechanical solutions and mechatronic systems.
- *Measurements:* facilities and qualified operators for prototype- or production-level testing of electrical machines and transmission gears covering a broad power range.
- *Manufacturing:* facilities for the manufacturing of electrical machines, electromechanical actuators, precision machined components for both series and prototype production.

Software

- SPEED and Motor-CAD: exclusive distributor the Benelux area



Dr. ir. Johan J.H. Paulides
Director

Kerkstraat 13
5161 EA Sprang-Capelle
T: +31 (0)41 627 23 51
E: info@ae-grp.nl

www.ae-grp.nl

MTSA Technopower

MTSA Technopower designs and builds customer specific equipment, installations and machines. MTSA Technopower has own products which are used for switching high power at short circuit laboratories and atomic fusion. MTSA Technopower offers production capacity (manufacturing and assembly) and on-site service.

Product information

To initiate the atomic fusion process large amounts of energy need to be applied in a controlled manner. MTSA Technopower developed high power switches to make or break a high current at the right moment. Typical products we supply:
Make Switches – Safety Break Switches – Separators – Rogowski measuring systems

This type of equipment is being applied at KEMA, JET and various other short circuit laboratories, e.g. KPT, Toshiba, EETI, KERI and Ormazabal.

In addition MTSA Technopower designs and builds customer specific equipment, installations and machines. Within the nuclear sector we acquired a great deal of experience by taking over KEMA Techniek in 2003 and close relations we maintain with scientific institutes within the Energy Sector like ECN, NRG and TNO. For the nuclear sector we designed and built for instance:

Special remote handling systems for application in radio active environment – High power switch systems – Gas dosing systems – Special machines – Prototype installations – (Spare) Parts and modules/subsystems

Customer specific projects can be divided into the following stages, whereby we can join at any level:
Concept engineering – Basic engineering – Detail engineering – Procurement and manufacturing of parts – Assembly – Testing – Installation and commissioning – Maintenance

Rob van der Sluis
Manager Marketing & Sales

Westervoortsedijk 67
6827 AT Arnhem
T: +31 (0)263 63 63 10
E: rob.vandersluis@mtsa.nl

70 employees

www.mtsa.nl

MTSA TECHNOPOWER

Wijdeven Inductive Solutions

As a subsidiary of Phoenix Mecano Wijdeven develops and produces transformers, inductors and electromagnetic systems to customer specifications.

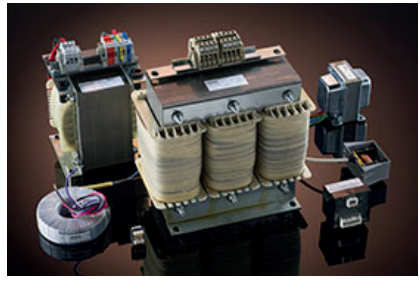
More than 50 highly motivated employees are divided into two ISO 9001 certified sites in Oirschot and Ter Apel.

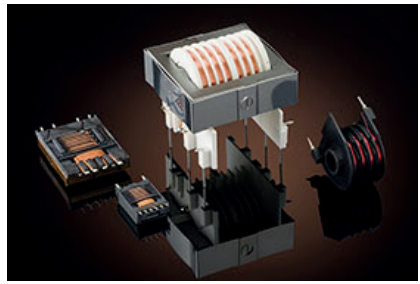
Besides its own production facilities in the Netherlands Wijdeven has partnerships in Eastern Europe and the Far East.

Wijdeven is known as
Knowledge partner, short time-to-market, innovative, solution provider and cost efficient.

Sectors
Customers are located in the most diverse sectors, such as power electronics, healthcare, climate control, machine & equipment construction, measurement & control, mobility, motion and telecom & security.

FEM calculations
On customer request FEM calculations, electro-magnetic and thermal simulations can be performed. Also for the calculation c.q. (partial) production of actuators.





René van den Heuvel
Sales Director

De Scheper 250
5688 HP Oirschot
T: +31 (0)499 32 01 30
E: info@wijdeven.com

www.wijdeven.com

WIJDEVEN

A Phoenix Mecano Company

Goudsmit Magnetic Supplies

Goudsmit Magnetic Supplies – Dutch Quality Magnetic Components

Goudsmit Magnetic Supplies forms part of the globally operating Goudsmit Magnetics Group, a family business incorporated in 1959 with branches in the Netherlands, France, Germany, the UK, and the Czech Republic. The company is specialized in delivering high quality permanent magnets and magnet systems to the automotive, aerospace, electronics and medical industries.

Certifications

Goudsmit Magnetic Supplies is one of the few European magnet suppliers that is both ISO 9001:2008 and ISO/TS 16949:2009 certified. As such, we are capable of conducting internal process audits in accordance with VDA6.3. This enables us to operate in many market segments, including the automotive, oil & gas, space, medical and even green technology industries. We utilize a globally operating distribution network and offer the support of our skilled R&D and QA engineers, who have the most advanced measuring equipment available.

Magnetic measurements & calculations

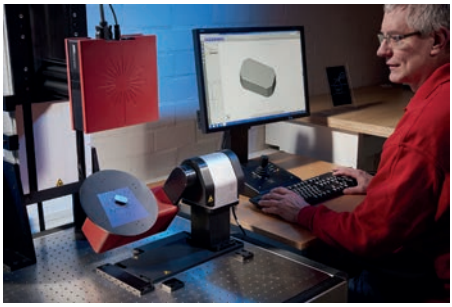
Our most recent test equipment acquisition is an optical 3D scanner which enables us to provide three-dimensional measurement data and analyses for industrial and automotive parts. Rather than just measuring individual points, the complete geometry and basic shape of an object are precisely established in a dense point cloud or polygon mesh. In addition we also are able to perform magnetic calculations in 3D.

Supply chain integration

Goudsmit Magnetics role in supply chain integration is to serve as a sounding board for our customers and to be part of the engineering, development and testing process for the component or assembly by utilizing our extensive experience not only in application engineering but also in the sourcing of high quality products. The key to successfully addressing trends such as falling cost prices, increased flexibility and global sourcing is long-term, reliable, predictable relationships between OEMs and the tier1, tier2 and tier3 suppliers. Establishing strong relationships requires excellent collaboration and communication throughout the chain and mapping out the improvement potential of the whole chain so it can compete, or continue to compete, at an international level.

In a nutshell

Being able to source high quality products, manage logistics, be a sparring partner in design and development, validate component requirements with state-of-the-art equipment and contribute to an optimized supply-chain makes Goudsmit a valuable and serious partner for the high-tech industry.



Marc Teeuwen
Sales Manager

Prunellalaan 14
5582 HA Waalre
T: +31 (0)40 221 90 15
E: supplies@goudsmitmagnets.com

www.goudsmitmagnets.com

GOUDSMIT MAGNETICS GROUP

VDA Verband der Automobilindustrie

Brainport Industries MEMBER

03
Electronics and radio frequency

03 Electronics and radio frequency	Company size	Speciality (USP)			Area							service		supply						
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
Peter Haak Productontwikkeling	M	high performance sensors&instruments	0250; 0290; 0350; 0450	sensor design & development, training, service			x			analogue	x			x			x	x		
DARE!! Development	s	development; projects	0250; 0350; 03	EMC; simulation						RF; Analog							x	x	x	x
High Voltage Potting and Coating (HVPC)	S	sealing/packaging electric components	03;	sealing, potting and coating; high voltage										x				x	x	
Active Space echnologies		automation, telemetry, space	03; 0207; 06	remote handling; thermal insulation				x	x	radiation hard	x	x	x	x	x		x	x		
Megahard		High end electronic PCB serviceprovider	03; 0303	3D-design; prototyping; production; programming						including encolsures	FPGA			x	x		x	x	x	
Sintecs		high speed PCB electronic design service	03; 0303	modular systems; embedded SW; spec. products						FPGA	embedded				x		x	x	x	
Technolution	S	high-end electronic HW&SW applications	03; 0303	custumer specific development & engineer-ing						high speed data acq	embedded	x					x	x	x	
TBP ELECTRONICS	S	electronics manufacturing service (EMS)	03; 0303; 04	lifecycle solutions; PCB design, assembly and test						PCB large series	x			x				x	x	
Thales Group	S	Competence Center for Printed Circuit Boards	03;0303;04	design/manufacuring complex RF and mixed signal PCBs						PCB small series	embedded			x		x	x	x	x	x
Topic Embedded Products B.V.	L	embedded software & hard-ware products	03; 0303; 04; 030304, 0390, 04, 05	development kits; FPGA-programming; board dev.						x	Embed-ded, HPC	x	x	x			x	x	x	
TNO	L	general innovation partners	03; 04; 05; 06; 07; 08; 09; 10	optics; mechanics; electronics; nuclear	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

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

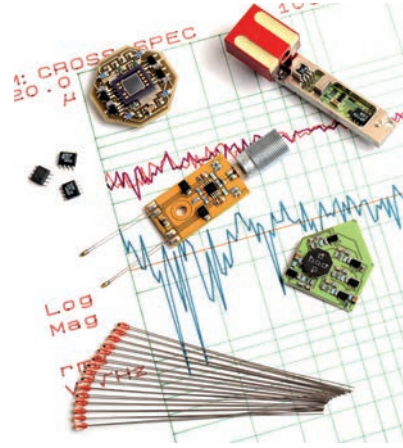
- high resolution and low noise circuit design: discrete, IC-based or "composite" designs and hybrid circuits
- solutions for signal integrity in a real life environment: think of 1/f noise, popcorn noise, thermal EMF
- extensive knowledge of electronic components, materials and processing, circuits 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 (0)736 90 14 54
E: peter.haak@hetnet.nl

peter haak produktontwikkeling

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
E: development@dare.nl

45 employees

www.dare.eu/development

DARE!!
Development

H.V.P.C.

H.V.P.C., or High Voltage Potting and Coating, is self-reliant since 2002. We are specialized in winding, assembling, potting, coating and testing of high-tech products. Being experts makes us also the best possible advisors in this field. These products are mainly for the medical- and defense industry, but we also have customers in the aviation industry.

H.V.P.C. is a dynamic production company with few hierarchical lines. These short lines result in quick settlements and a strong workforce. The workforce increased through the years from 8 to 18 enthusiastic employees.

H.V.P.C. sets high demands for its performance. The product quality, service and reliability of the deliveries are among the best in the world. H.V.P.C. logistics uses short channels and therefore purchasing activities are quick, control is good and delivery times are reliable.

Adapting to developments in the market with the help of innovative technologies and shaping an effective organization with flexible processes are characteristic of H.V.P.C. The flexible processes result in the possibilities to produce single pieces or small series.

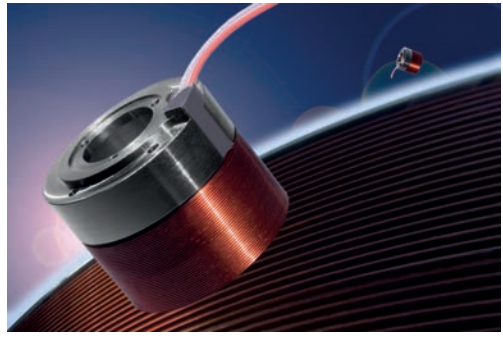
Products

H.V.P.C. is specialized in single production or small series. H.V.P.C. produces a large variety of products (durable types), both existing as new designs, which can be realized in consultation with the client.

H.V.P.C. is a production company for mainly high-tech inductive components, such as (high voltage) transformers, choke-coils and deflection coils. Also high-tech power supplies and high-tech connectors poured into as well as oil and different synthetic materials (silicones and epoxies).

References

Thales – ASML – FEI – Selex



Gerard Bruggink
General manager

Havenstraat 28b
7553 GG, Hengelo (O)
T: +31 (0)74 255 54 21
E: G.bruggink@hvpc.nl

Turnover: 2,5 M€ | 18 Employees

www.hvpc.nl

HIGH VOLTAGE POTTING COATING

Active Space Technologies

Active Space Technologies is an SME incorporated in The Netherlands since 2004. We have been engaged in high added-value projects in two main areas:

- automated infrastructures;
- telemetry systems.

Our customers include the European Space Agency, TNO, and ITER.

Product information

Infrastructure

Active Space Technologies specializes in automation and control, in particular for remote handling manipulation, automated operations, and logistics. We have sound experience in the use of Automated Control Vehicles (AGVs), robotic arms, electro-mechanical systems, complex operations, and programming (FPGA, PLC, wireless communications).

Telemetry

Whether it's in space or on firm ground, Active Space Technologies deals with harsh environments (temperature, radiation, high pressure, among other critical conditions). In order to meet this market need, we use and install smart sensors capable of measuring flow, temperatures, strain, and pressure while withstanding the most adverse conditions. These self-sufficient smart sensors are capable of harvesting energy and encrypting data, and can communicate both via wired cable and wireless.

Insulation

Active Space Technologies further commercializes Aerogels – Aeroflex© – which was originally designed for super insulation applications in space. Aeroflex© can be used both for thermal insulation (cryogenics and pipelines) and absorption (oil & spill and organic contaminants from wastewater). Its proprieties are the following:

Thermal conductivity: 35 mW m^{-1} K^{-1}
Highly hydrophobic
Porosity: 93 - 97%
Low density - < 80 kg m^{-3}
Operating temperature: -200 to 350°C

António Torres da Costa
Business Development Manager

Kapteynstraat 1
2201 BB Noordwijk
E: antonio.costa@activespacetech.com

www.activespacetech.com

activespace technologies
making space a global endeavour

Megahard

Technology development services

Megahard is a high tech electronics design service provider. We have the capability to design in our own lab or we can provide talented trusted engineers to work at your organization.

The design service we provide can range from a PCB to a complete technology development including enclosure design and software development.

Research institutes and universities

Megahard has strong roots in the scientific research world. Our specialty lies in the development of apparatus for scientific research and application demonstrators of scientific research. Megahard engineering has many years of experience in development of lab and field-ready research tools and demonstrators.

Technology development capabilities:

- 3D designs and 3D rendering
- 3D printing/rapid prototyping
- PCB design and production
- Embedded systems programming, FPGA “programming”
- Functional testing
- Environmental testing

Technology support capabilities:

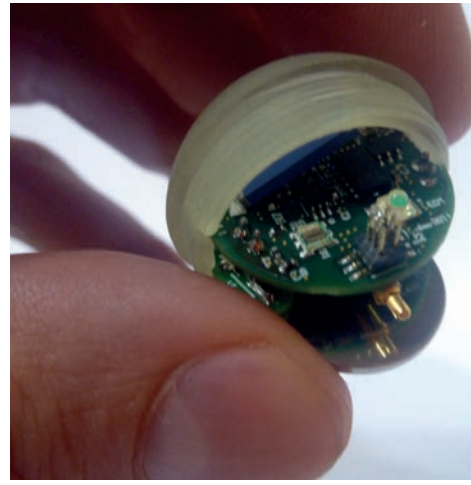
- Technical documentation writing
- Translating technical documentation and software: French, Dutch, English, Spanish, German
- Recruitment of specialized electronics design engineers

Georges Meinders

Sint Helenahof 15
9617 EG Harkstede
T: +31(0)850 02 00 24
F: +31(0)848 36 52 13
E: georgesmeinders@megahard.pro

www.megahard.pro

Megahard
The design of your imagination.



Sintecs

Introduction Sintecs

Sintecs was formed in 2000 as an Electronic Design Service company specialized in high-speed board design and analyses. Since that time, Sintecs has been involved in the development of high-end products in several market segments like Industrial, Medical, Telecommunications, Aerospace, Defence, etc. With our projects, we have consistently pushed forward technology boundaries.

Sintecs offers different solutions in the area of System-On-Modules development, Embedded system design and Electronic Design Services. We enable our customers to create better products that increase productivity, improve product quality, improve total cost of ownership (TCO) and provide environmental benefits.

Services

Signal Integrity analysis	DFM/DFA verification
PCB design	EMC verification
Thermal analysis	Library development
Power Integrity analysis	EDA design support
Timing analysis	IBIS Resources

Engineering

Product design	FPGA Design
Electronic design	Type Approval
Embedded software design	

Products

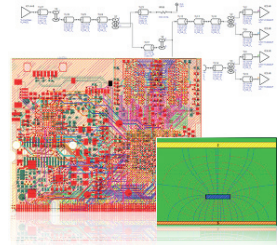
SES-MX536	SiMC-T20x
SES-MX6S/D/Q	SiMC-LS20xx
SiMC-T10xx	SiMC-TCB01

References

ASML – Thales – Ten Cate – Bosch

Partners

Mentor Graphics – Freescale/NXP – Samtec – Cadence



Pim de Sain
Commercial Manager

Lansinkesweg 4
7553 AE Hengelo
T: +31 (0)742 55 57 13
E: pim.de.sain@sintecs.eu

www.sintecs.eu/

sintecs
Excellence in Electronic Development

Technolution

Technolution; the right development

Your end result is our passion. Using our knowledge of technology and taking from our vision of your domain, we elicit what your needs and demands are, keeping the dialogue open and encouraging your participation throughout the whole process. With this approach we develop a user friendly and technically smart solution.

Curiosity and innovation

Ever since we started 28 years ago, we are driven by curiosity and innovation. Our 180 colleagues thrive on bringing new technologies to practical applications in your domain. We are always working at the edge of what is technologically possible, but turning novel technology into working practical solutions.

Products and services

We design and develop high-end electronic products e.g. hardware, software and applications for customer specification and for our own products. Our core markets are Mobility, Energy and Science&Industry. We have designed, built and delivered products and systems for electron microscopes, lithographical machines, medical systems, etc.

Unique selling points

- We provide solutions (hardware, software, building block, IP) for high-end equipment.
- We excel at the combination of hardware and software
- We have a track record in extremely high speed data processing and acquisition
- We build and deliver solutions for very demanding environments
- With combine technical and application domain knowledge

Bas Dunnebier

Burgemeester Jamessingel 1
P.O. Box 2013
2800 BD Gouda
P: +31 (0)182 59 40 00
M: +31 (0)6 118 83 830
E: info@technolution.eu
E: bas.dunnebier@technolution.nl

www.technolution.nl

Technolution

tbp electronics

tbp electronics is a leading Dutch integrated Electronics Manufacturing Services (EMS) company providing end-to-end product lifecycle solutions that include early involvement, Design for eXcellence, for Manufacturing and for Test (DfX, DfM & DfT), product development, procurement, pcb assembly and testing, test engineering, inspection, product- and cabinet building, repair, supply chain management and logistic services. The name tbp defines itself as being in 'the business of perfection' and strives to provide its customers with excellence in all key areas: the race for perfection has no finish line.

Since 1976 tbp has been serving customers in the semiconductor, media, entertainment, ICT, telecoms, graphics, industrial, petrochemical, construction, shipping, broadcast, science, medical and defence sectors. With over 130 employees tbp electronics is a privately owned company with its headquarters in Dirksland in the Netherlands. Our company is officially qualified ISO 9001:2008 and AQAP 2120:2009.

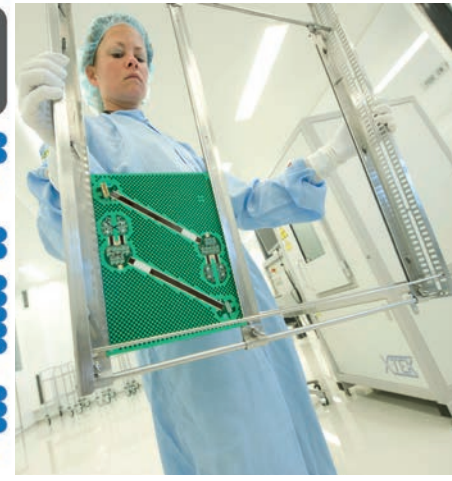
For more information, visit tbp's website at www.tbp.eu

early involvement that's…
one small step for tbp
one giant leap for manufacturing

Mr Ir. Frans Geerts
Executive business development

Vlakbodem 10
3247 CP Dirksland
T: +31 (0)187 602 744
F: +31 (0)187 603 497
M: +31 (0)6 50 25 27 08
E: fgeerts@tbp.nl

www.tbp.eu



Thales Group Competence Center for Printed Circuit Boards

The Thales Group Competence Center Printed Circuit Boards is a low-volume supplier of high performance and high reliability complex and advanced printed circuit boards for mission critical systems.
The printed circuit board facility in Hengelo has evolved since 1969 as an internal manufacturing department within Thales Netherlands, supporting prototyping, new product introduction and technology developments for radar frontend systems. In 2012 it was appointed Thales Group Competence Center Printed Circuit Boards (GCC PCB) offering a wide range of capabilities specially tailored to the Thales Group needs with emphasis on advanced and complex RF and mixed signal printed circuit boards. Production is performed primarily for a customer base in:

- Avionics
- Space
- Defence
- High Rel Industrial applications

With respect to quality control and assurance the centre holds MIL 55110 and MIL 31032, ISO 14001 and ISO 9001 certifications and is a member of the IPC. Inspection is performed in compliance with IPC class 2 and 3 requirements. The Thales Group internal acceptance criteria: TRT 16 262 721 for rigid printed circuit boards and TRT 16 261 983 for microwave printed circuit boards are being implemented as part of the GCC activities. In-house reliability testing and environmental stress screening are available. Product categories and application areas include power modules, analogue boards, HDI, high speed digital multi layers, mixed signal boards, stripline flex and rigid structures, and antenna panels.

Rigid panels size up to 24x(36-48) inches and flexible layers up to a length of 10 m can be manufactured. A wide multilayer material experience ranging from FR4, PI, a large variety of RF materials (Rogers and teflons) and their combinations together with metal core materials like aluminium, BeO and AlSi and copper is present. The PCB center exhibits technical capabilities including laser direct imaging, advanced mechanical drilling and routing equipment in order to fulfil demanding registration requirements. The current lithography processes are upgraded towards state-of-the-art-fine-line capabilities. Interconnection techniques include UV/CO2 dual-source micro via laser drilling, via hole filling and over plating. Additional features like cavities, back drilling, embedded resistors and thermal management are also part of the technology portfolio. Advanced AOI, BBT testing and cross section analysis is used. Available surface finishes are HAL (PbSn), ENIG, ENEPIG, selective electrolytic PbSn, selective electrolytic Ni and hard- or soft Au and their possible combinations.

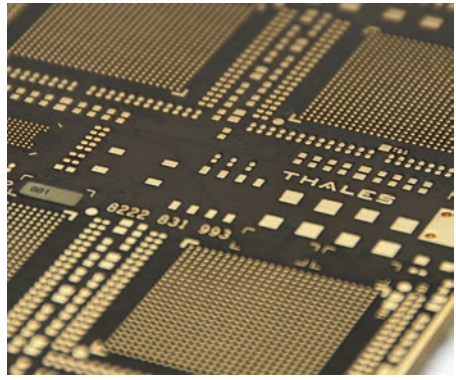
Robin Lemsom

Sales Manager Group Competence Center
Printed Circuit Boards

Zuidelijke Havenweg 40
7554 RR Hengelo
M: +31 (06) 532 087 45
E: robin.lemsom@nl.thalesgroup.com

www.thalesgroup.com

THALES



Topic Embedded Products

The innovative solutions, offered by Topic Embedded Systems, cover all designs disciplines and collaboration models to make your embedded application a success. The services are delivered in three different ways: consultancy, project execution and standard embedded products.
With more than 175 consultancy specialists, we can be present on your premises, strengthening your development team with the expertise you need: C/C++/C#, Java, Pearl, VHDL, Linux, etc. at the level you need: designers, architects, project management. Our colleagues are highly trained (Bachelor, Master, PDEng, PhD) and available for short and long term development projects. They have a broad project experience which enables them to add significant value to a project.
By subcontracting your whole or partial application to Topic Embedded Projects, our internal projects organization, your development is in good hands. The projects are carried out at our Best office. The content of these projects may be mono-disciplinary, which benefit from our software, FPGA or board design capabilities. They can also be multi-disciplinary, incorporating all these disciplines. In that case complete designs, including enclosures, mechanical design aspects as well as motion control can be incorporated in the design effort. Project execution is based on our Agile/Scrum way-of-working which is ISO 13485 certified. This hazard analyses centric development approach allows us to design medical application where the design dossier is a certified part of your medical design history file. Our development processes are setup in such a way that they are easily adaptable for different quality systems, for instance to comply to CENELEC rules for functional safe application design.
We are particularly proud that Xilinx, a well-known FPGA and SOC silicon vendor, has qualified us as one of their Premier Alliance Partners. Our products portfolio is based on Xilinx technology. This is an eco-system of combinable and compatible high-quality system-on-modules (SOMs), carrier/evaluation/development boards and software infrastructure. By applying these hardware and software building blocks, Topic reduces your board, software and development effort by efficiently re-using design, production and functional experiences. This reduces development time, improves your time-to-market, leads to cost reductions and increases your chances on a first-time-right design. The products portfolio consists of:

- Miami System on modules, carrying Xilinx Zynq 7000 SoC (ARM dual core Cortex A9 CPU), Zynq Ultrascale+ (ARM quad core Cortex A53) or Kintex7 FPGA
- Florida carrier boards with versatile interface capabilities (Ethernet, Wifi, USB, HDMI in/out, LCD/TFT touch display, battery charging, etc.)
- Dyplo®, our Dynamic Process Loader, which is an "operating system" on FPGA fabric that makes the FPGA behave as part of the software infrastructure like a thread pool. Exploring the capabilities of FPGA based partial reconfiguration, the FPGA gets software-like capabilities.

Functional safety infrastructure, allowing for rapid implementation and certification of "smart" SIL2, SIL3 and SIL4 safe processing platforms.
One of the key-differentiating capabilities op Topic is the ability to combine the use of Topics standard products with Topic Projects based customization services for rapid application development. This leaves more time to focus on the true added value of the application where the infrastructural part is already proven technology. One good example is the development of the Rasnik customized carrier board, which is now deployed at CERN in the optical alignment solution for the Hydron Collider, replacing a 100W standard PC-frame grabber card solution by a Linux based Miami SOM – customized carrier board solution with less than 5W power consumption.

Eric van der Laak
Director Projects

Materiaalweg 4
5681 RJ Best
T: +31 (0) 499 33 69 79
E: Eric.van.der.laak@topic.nl

www.TopicProducts.com

TOPIC EMBEDDED PRODUCTS
Embedded in your future

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 (0)152 69 21 80
E: bart.snijders@tno.nl

Turnover: 494,6 M€ | 4,400 employees

www.tno.nl

TNO innovation for life

03
Electronics miscaleanious

03 Electronics miscellaneous	Company size	Speciality (USP)			Area							service		supply						
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
Linear Technology		high performance analogue ICs	0301; 0305	power; RF; data conv; signal proc; sensor network						integrated cirquits	embedded						x	x	x	
Actemium E&A	S	Information technology	030411; 02	electro mechanical; PCB design			x			Digital	x	x	x		x		x	x	x	x
ACQ Inducom	S	Information technology	030411; 0207	electro mechanical automation			x			ADC/ DAC; I/O;	embedded	x	x	x	x	x	x	x	x	x
Delta Elektronika BV		DC power supplies	0305;	custom specific development						power supplies							x	x		x
Ampulz		high power conversion systems;RF	0305; 0201	RF; AC and DC tailor made power electronics						RF high power	x		x	x	x		x	x	x	x
AR Benelux BV	S	Electronics and radio frequency	0305; 0350; 0210	test & measurement						x				x				x		x
Hitec Special Measuring Systems	V	current measuring	0350; 0350105; 03500108	AC and DC high current measuring													x	x	x	x
Omics2Image	M	imaging detectors for analysis	03500405; 0902	detectors for mass spectrometery							x					x	x	x	x	x

Linear Technology Corporation (LTC) Benelux

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for over 35 years. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems.

Product Information

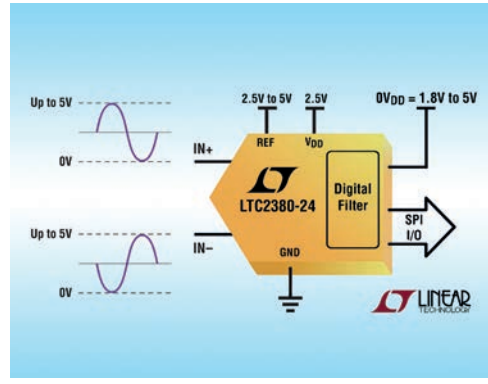
Linear Technology Corporation produces products covering:

- Power management
- Data conversion
- Signal conditioning
- RF and interface ICs
- µModule subsystems
- Wireless sensor network

Solutions

Linear Technology Corporation provides expertise not only on the workings of our parts, but also the larger, often complex problems customers are looking to solve. The Linear Technology Circuit Collection conveniently assembles some of the most popular designs from our data sheets, design notes and application notes. The Linear Technology Blogs offer insights into applications directly from our team of analog gurus – by engineers, for engineers.

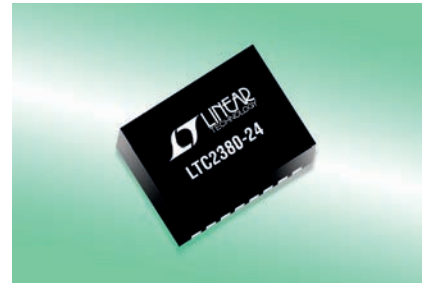
For more information, visit www.linear.com



Mr. Tim Viaene
Field Applications Engineer

Osterfeldstrasse 84, Haus C
D-85737 Ismaning, Germany
T: +49 899 62 45 50
E: tviaene@linear.com

www.linear.com



Actemium E&A

Actemium E&A is specialist in controls, Printed Circuit Boards, electronic units, machine and modules for the high tech Industry.

Actemium is a tradename of VINCI Energies and consists of a network of cooperating VINCI Energies companies which delivers their products and services to the industrial market. Actemium advises, supports industrial customers in the construction, optimization and maintenance of their industrial production facilities.

Product information

The core competence of Actemium E&A is the development, engineering, production and testing of high tech electro mechanical systems and PCB (printed circuit boards).

Customers of Actemium E&A can be found in Medical, Electronics, Lighting, Optical, Semiconductor, Military, Solar & Energy, Food, Feed, Chemicals, Logistics and Science.

Our capabilities summarized

- Machine controllers and line
- Mechatronics Measuring and testing systems Module Construction Panel Construction (prototypes and serial) Power control cabinets PCB (printed circuit boards) Prototyping Engineering Embedded software Cleanroom UL Panelshop, CE certification Supply Chain Management QMS After Sales (repair and spare)

Project reference EFDA

Actemium built four control units for the new high voltage supply units (160.000V, 130A) for the Joint European Torus (JET) project of UKAEA in Culham – United Kingdom.
The improved supply units will be used to facilitate a higher energy output of the Torus (50 – 70%).

Reference

Philips – ASML – NXP – Bosch – Océ – Canon – Kema – TNO – Vialis – Moba – ASM – van der Lande – Mars – VDL group, Pon Power – Fuji – PANalytical – UKAEA and EFDA.

Elroy van der Schoot
Projectmanager

Eisenhowerweg 39
5466 AB Veghel
T: +31 (0)413 38 44 89
E: evdschoot@actemium.nl

Turnover: (M)€ 56 | 450 Employees

www.actemium.nl

ACTEMIUM

AcQ Inducom

AcQ Inducom develops, produces and delivers solutions for a wide range of embedded electronics applied in aerospace, science, transportation and industrial automation. In most cases this involves the design, building and support of embedded real-time hardware- and software components. Strengths of AcQ Inducom are fast prototyping, safety-critical designs, form-fit-function replacements for discontinued products and long product life cycles. AcQ Inducom also participates in large European 7th framework programs, such as SCARLETT, Actuation 2015, ASHLEY and AFLoNext.

Products and Competences

- Embedded System Engineering
- High-throughput data processing systems
- Rugged small form factor systems
- Safety critical applications
- FPGA design (e.g. Xilinx, Lattice)
- High-performance processor boards (e.g. Freescale)
- Real-time OS support (e.g. VxWorks, PikeOS)
- Developing according to market specific standards (e.g. DO-178, DO-254)
- VPX, AdvancedTCA, VME, CompactPCI and PCI products
- PMC, XMC and M-modules
- Various I/O boards:
  - CAN, ARINC429, MIL-STD-1553/STANAG, AFDX
  - Ethernet, switch and controllers
  - Analog – Digital (ADC, DAC)
  - High-speed serial communication
  - Temperature measurement (PT100,200,500,1000)
  - Serial communication
  - Audio and video controllers
  - Motion control, LVDT/RVDT, encoders

References

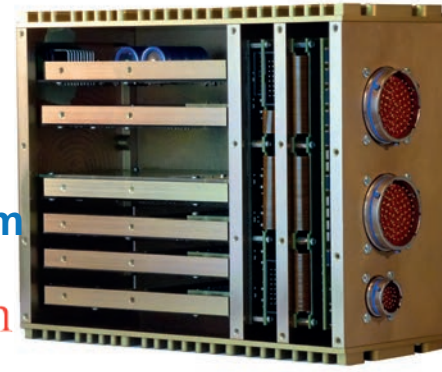
Airbus – Alstom – Bombardier – Eurocopter – Danieli-Corus – Horiba – Tata Steel

Jeffrey van Grunsven
Business Development Manager

Rijnstraat 20
5347 KN Oss
T: +31 (0)412 64 19 22
E: jeffrey.van.grunsven@acq.nl

www.acqinducom.com

AcQ Inducom



Delta Elektronika BV

DC Power Supplies
Delta Elektronika designs and manufactures DC power units since 1959. A power supply is seen as a minor part of any equipment and often taken for granted. For many just an electronic box ordered at the last moment. It can be compared with our heart. It's often neglected and we tend to pay even more attention to our hair. But if the heart fails the system goes down.

Design concept
By reputation, a Delta power supply must be reliable. This is why our design concept has a strong emphasis on excellent technical specifications and long life. The specifications of our products may seem unrealistic but turn out to be even better when measured. Delta users expect perfection and an almost infinite life time at continuous full power and low cost of ownership. An ongoing research program has resulted in production designs that can meet an ever increasing number of specifications.

Result
As a result of our design philosophy the units react more than 10 times faster on load transients, produce hardly audible noise and produce 10 – 30 times less electromagnetic interference. Delta customers will never face any problems due to radiated or conducted emissions of our power supplies. The same design philosophy applies for immunity: the toughest standard is not good enough for us. A Delta power supply will operate totally reliably even in a very noisy environment. All our power supply units are thoroughly tested before being dispatched to the customer. All this ensures the long term correct functioning of each unit and client satisfaction. Delta Elektronika produces world class DC power supplies.
We are proud to hear our customers say: ***"you are making them too well."***

Service and Support
Just designing and producing excellent products is not enough. At Delta we believe that excellent power supplies are incomplete without outstanding service and support. Only the best manufacturers do not let you down when problems might occur. We keep on helping. Also when equipment has been bought many years ago or when you made the mistake.

For us it is only natural that Delta users get technical support and advice about applications within 24 hours. Lead times are as short as possible and our product support is at least 10 years after the production of a unit has been stopped. Just because our customers appreciate this.
Delta Power Supplies: ***excellent products, excellent service!***

M.A. Giltay
Sales

Vissersdijk 4
4301 ND Zierikzee
T: +31 (0)111 41 36 56
E: sales@delta-elektronika.nl

www.delta-elektronika.nl

DELTA ELEKTRONIKA
DC POWER SUPPLIES

Ampulz

Ampulz optimizes power conversion systems in a rapidly changing industrial market. Inspired by technological developments, Ampulz is contributing to a sustainable environment. Our solutions find their way into various applications for:

- Industrial processes
- Nuclear fusion research
- Particle accelerators / synchrotrons
- Electricity distribution grids and Renewable energy

As an independent partner, we provide and maintain systems between grid connection and your primary business process. Solutions are based on standard components and existing "building blocks" tailored to specially designed converters or drive systems. Together with you, we realize savings, higher availability and accuracy at system level, by realizing the best-suited solution with knowledge and experience from your process.

We have 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

When the stakes are high and power conversion is key and complex, invest your trust in Ampulz. Our independent solutions and services are unparalleled throughout the world.

Some of our references for scientific institutes: ESRF – 2.4 MW booster power supply, Quadrupole power converters, Forschungszentrum Jülich – Septum Magnet power supply, HFML Nijmegen (NL) – 20 MW DC Converter System Modular Conversion System and 15 kA power supply for super conducting magnets, ASDEX upgrade IPP Garching (D) – Extension of the Pulsed Power Supply Network of ASDEX, Helmholtz Zentrum Berlin (D) – 8 MW 20 kA Power Converter System, Solvin Antwerp (B) – 1 MW PEM fuel cell conversion system

Erwin Lenten
Manager Sales & Services

Modem 30
7741 MJ Coevorden
M: +31(0) 6 54 78 65 07
E: erwin.lenten@ampulz.com

www.ampulz.com

Ampulz. | Energizing Ambitions

AR Benelux

Specialists in test and measurement solutions from DC to RF

AR Benelux offers products from well established industry names including Teledyne LeCroy, Kepco and MITEQ. To compliment our standard of the shelf solutions we also provide custom solutions, a wide variety are offered ranging from AC/DC power supplies to special designed RF solutions.

European partner

AR Benelux is part of the AR Europe group of companies which consists of the European AR offices in the Benelux, Germany, France, United Kingdom and sales associates across Europe.

Product groups

- AC/DC Power
- Electrical Safety
- Oscilloscopes
- EMC
- RF/Microwave
- General T&M
- Custom Solutions

AE TECHRON®
Precision Industrial Amplifiers

AMETEK®
PROGRAMMABLE POWER

GLASSMAN HIGH VOLTAGE INC.
Designing Solutions for High Voltage Power Supply Applications

AN ISO 9000 COMPANY
KEPCO®
THE POWER SUPPLIER™

MITEQ

TELEDYNE LECROY
Everywhereyoulook™

Ronald Rehorst
Verkoop Binnendienst

Frankrijklaan 7, ITC Boskoop
2391 PX Hazerswoude Dorp
T: +31(0)172 42 30 00
F: +31(0)172 42 30 09
E: arbeneluxinfo@arworld.us

www.arbenelux.com

ar benelux bv

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.

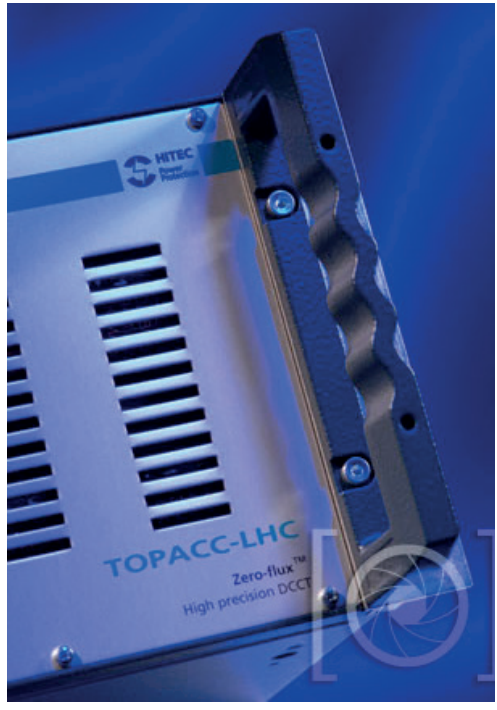
Hitec was the first to introduce a revolutionary high precision current measuring system based on the Zero-flux principle.

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 (0)546 58 95 89
E: info@hitecsms.com

Turnover: 5 M€ | 9 employees

www.hitecsms.com

HITEC Power Protection

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 (0)204 70 03 99
E: info@omics2image.com

3 Employees

www.omics2image.com

04
Information and communication technology

04 Information and communication technology	Company size	Speciality (USP)			Area							service	supply							
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
Tessella	S	Science powered software technology	04;	consulting; IT architecture, design and built							x			x				x	x	
StreamComputing BV	V	Software for GPGPU computing, R&D	0401; 0405; 040502	code optimisation; low level programming							Open CL/MP; CUDA			x		x	x	x		
Advanced Solutions NL		Information technology	0405; 040509; 0350	electronics design; simulation			x			DSP; signal analysis	embedded			x			x	x		x
4DSP BV		Information technology	049001; 040509; 0304	analogue & digital electr.						FPGA; DSP; data acq.	embedded									

Tessella

Tessella is the international provider of science powered software technology and consulting services. World leading organizations choose our unique blend of science, software engineering and sector expertise to deliver innovative and cost-effective solutions to complex real-world commercial and technical challenges. Our people are high achievers from leading universities and are passionate about delivering value to clients; more than 50% hold PhD qualifications. We are proud that our work makes the world a better place to live in: developing smarter drug trials; preserving the digital heritage of nations across the globe; minimizing risk in oil and gas exploration; controlling the orbit and attitude of satellites; researching fusion energy.

Services

IT Consulting Tessella IT consulting services advise businesses on how best to use information technology to meet their business objectives. We provide a broad range of IT consulting skills that include: business analysis, IT strategy, supplier selection and IT architecture.

Technical Consulting With over 100 PhDs in the company, and a broad experience in academic and industrial research across a wide range of sectors, Tessella constitutes a world class problem solving engine able to bring novel ideas and innovation to your business.

Science Powered Software Development & Systems Integration has been at the heart of what we do for over 25 years. In that time we have designed, built and deployed thousands of successful software systems and IT projects, for hundreds of clients.

References

Tessella customers include: JET fusion research laboratory – ITER – TNO – Deltares – European Space Agency – Dutch Space – Rutherford Appleton Laboratory – Diamond Light Source – AkzoNobel – Unilever – Shell – Koninklijke Bibliotheek

"Tessella's background in science and their professional approach to system design and development means we have been able to significantly increase our overall capacity, efficiency and quality." — Aart Wismeijer, Senior Researcher, High Throughput Experimentation. AkzoNobel

"…Tessella really understands R&D users and processes. This translates into responsive levels of support, and a real appreciation for how each application can be enhanced going forward." — Pete Keeley, Innov8 Programme Manager, Unilever

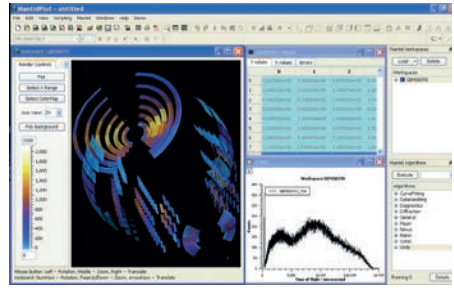
Dr. Eric Arends
Operations Manager

Laan van Nieuw Oost-Indië 133
2593 BM Den Haag
T: +31 (0)70 392 71 01
E: info@tessella.com

Turnover: €23M | 240 employees

www.tessella.com

Tessella
Technology & Consulting



StreamComputing

StreamComputing B.V. is an international software development company based in the Amsterdam that specializes in speeding up software using the power of GPGPU computing. Using algorithmic optimisations and special coding techniques, the above three accelerators can outperform a CPU around 8 times on average. Our team consists of the best GPU-developers out there, conveniently nearby in the Netherlands. We have a track-record of speeding up code several thousands of times.

Experienced in

- Large collision experiments
- Real-time Big Data processing
- Specialised linear algebra libraries
- Quantum chemistry/physics simulations
- Image and video processing.

Offered services

- OpenCL, CUDA and OpenMP programming.
- Generic super-computer programming.
- Improving existing code (Python, Perl, C, C++, OpenCL, CUDA and more).
- Low-level programming.

Vincent Hindriksen
Director

Science Park 402
1098 XH Amsterdam
T: +31 (0)85 486 57 60
E: info@streamcomputing.eu

www.streamcomputing.eu

STREAM COMPUTING
Performance Engineers

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.

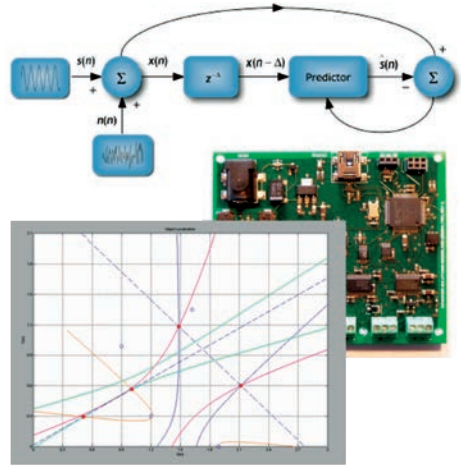
Selected references

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 (0)62 493 97 18
E: info@advsolned.com

www.advsolned.com



4DSP

Leader in data acquisition and signal processing solutions

4DSP is an innovative company specialized in the design and production of FPGA products, high speed digitizers and turnkey systems for the most demanding applications. Located in the Netherlands, 4DSP is ideally suited to partnering with European companies in order to deliver solutions for the most challenging applications.

Products

- *FPGA COTS Boards:* Based on Xilinx Virtex and Kintex family FPGAs; in PCIe, VPX, XMC and FMX form factors
- *FMC Modules:* I/O and coprocessor boards: Analog inputs and output with up to 5.6 GHz sampling rate and up to 16 channels, radio transceivers, optical transceivers, clock sources and Digital Signal Processors (DSPs).
- *FPGA IP:* FFTs, digital filters, DDC, Serial FPDP and PCIe with DMA.
- *Systems:* Complete systems that can be either used as turnkey solutions or development platforms.
- Custom Solutions, Support and Consultancy

Applications

4DSP delivers high-performance DSP solutions for the specific requirements of Military, Aerospace, Biomedical, Chemical Science, Telecommunication and Research applications such as Image Processing, Software Defined Radio (SDR), RADAR, SONAR, Airborne Surveillance, Medical Imaging and Fiber Optics Sensing.

References

4DSP serves hundreds of customers across multiple industries including NASA – Boeing – BAE Systems – Lockheed Martin – Pratt & Whitney – Anite Telecom – Philips – CERN – RUAG Space, NLR, SRON – PSI – Siemens – Bosch – Fraunhofer and many more.

Nicholas Kopp
Business Development

Ondernemingsweg 66f
2404HN Alphen aan den Rijn
T +31 (0)172 78 21 90
F +31 (0)172 89 12 61
E: nick.kopp@4dsp.com

www.4dsp.com

ANAB Certified to AS9100 TÜVRheinland

Xilinx Alliance Program

Texas Instruments Design Network

Member VITA Open Standards, Open Markets

05
Mechanical engineering and raw materials

05 Mechanical engineering and raw materials	Company size	Speciality (USP)			Area							service	supply							
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
Betech Group	S	Machinig	05;	large series turning		x	x												x	
DeValk		Mechanical parts supplier	05;	3D printing; machining; assembly														x	x	
ECN	L	General engineering service	05; 02; 0590	R&D; systems; FEM, engineering, production			x			x	x			x	x		x	x	x	
Entechna		General engineering service	05; 02; 0590	R&D; systems; FEM, engineering, production			x			x	x			x	x		x	x	x	
Irmco BV	V	Waveguides; accoustic measurements	05; 03	customised systems		x			x	x				x			x	x	x	x
Demcon Advanced Mechatronics	M	Broad systems supplier	05; 03; 08	Engineering; prototyping; manufacturing			x			x	x	x	x		x		x	x	x	x
CCM	M	Conceptual mechatronics	05;04;03	systems engineering			x			x	x						x	x	x	x
PM-Group	S	Hi-precision stages & motion control	05; 050107; 050404	precision machining, system supply, engineering		x	x								x		x	x	x	
IBS pecision Engineering		Broad systems supplier	05; 050306; 03; 08	motion control, metrology			x			x	x		x		x			x	x	
Butraco	S	Projects	05; 06	prototyping; consultancy; business development	x	x	x	x	x			x	x	x			x	x		
KIN Machinebouw	M	Mechanical system suplier	05; 0501; 0502; 0504	machining; welding; assembly; very large parts	x	x									x			x	x	

Betech Mass Turning

The strength of Betech Mass Turning lies in the production of large series of turned goods. Complex micro turning and high precision parts, all in great quantities.

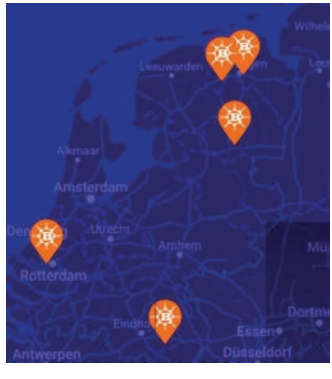
An evolution in intelligent production!

Located in the Netherlands, Betech is a leading European producer of large series of turned and mill-turned goods. Annually we produce tens of millions of custom made parts in all metals, for all kinds of customers worldwide. As thé fully automated and innovative machining expert Betech supplies multiple industries, varying from automotive industry to high tech industry.

Great Production Capacity	Quality Documentation
Short Delivery Times	Surface Treatments
Mass Production Expert	Strategic Partnership

Unmanned serial production

Betech operates 24/7 of which 80% is unmanned with fully automated and especially intelligent production techniques. The machinery consists of over 100 CNC-, mechanical-, and hydraulically controlled lathes, multi-spindles and transfer machines for turning and mill-turning. Our innovative manner of production results in a labor added value of 15 to 20% per product and therefor a highly competitive price level. We are specialists in a specific Ø-range of 0,8 to 69 mm from bars and tubes.

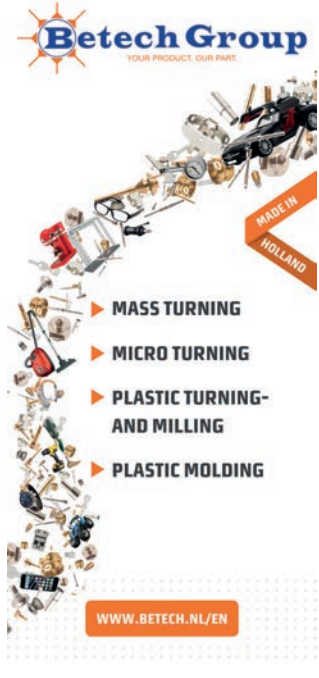


Arjan Schuinder
Sales & Marketing

Europaweg 20
7903 TM Hoogeveen
T: +31 (0)528 270 763
E: arjan@betech.nl

www.betech.nl/en

Betech Group
YOUR PRODUCT. OUR PART.



DeValk

Welcome to de Valk machine factory

The De Valk machine factory is a dynamic organisation established on 1948 in Valkenswaard, close to Eindhoven, the Netherlands. We are specialised in the production of mechanical components in all common steel types, non-ferrous metals and plastics, as well as the full production and assembly of modules and machines.

Furthermore, the de Valk machine factory has the capacity and the expertise to offer a broad range of additional services such as hardening, anodising, nickel plating, sheet metal work and engineering.

3D printing technology metals:
De Valk offers engineering and 3D metal printing services and supports its customers in the technical and commercial trade-off between the unique 3D printing feasibilities and the established machining technologies.

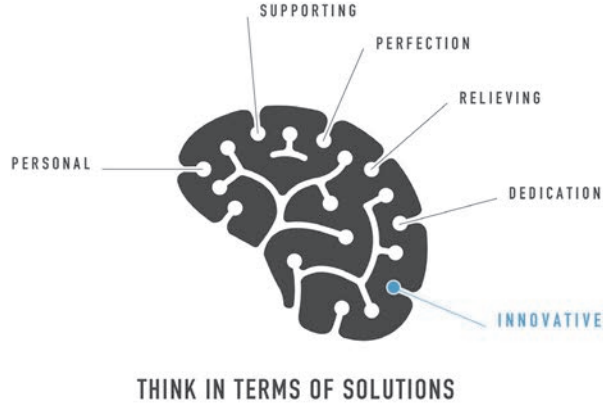
3D printing unique features are:
- Weight reduction by creating hollow stiff structures (internal hollow structures)
- Design of complex and free form internal cooling channels (cooling optimization)

Our services include:
- Topology optimization and engineering services
- Prototyping both 3D printing (Additive Manufacturing) and machining
- Business case validation

Our machine factory has a fully equipped cleanroom facility that complies with ISO class 7.

This website should give you an impression of our company's possibilities and versatility.

Interested in finding out what our company can do for you?
Please feel free to get in touch with us.



John Hagelaars

De Vest 76
5555 XP Valkenswaard
T: +31 (0) 402 01 24 88
M: +31 (0)402 01 24 88
F: +31 (0)402 01 95 40

www.machinefabriekdevalk.nl

ADDFAB
3Dmetalsfabricated

ECN Engineering

With over 50 years of experience, ECN is seasoned in complex engineering and manufacturing for extreme conditions (pressure, temperature, purity, radiation).

Mechanical engineering and materials science

We specialise in mechanical engineering and materials science. This broad base enables us to take your idea right through from initial design to turn-key installation: We work with you in close consultation to transform your concept into a design specification for your product or process, which our workshop – specialised in working with high-precision parts and exotic materials – can then realise for you. If required we can also arrange acceptance testing.

Competences

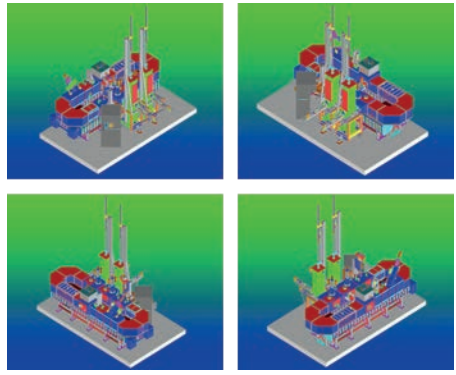
- Specifications, design briefs (SRS)
- Process and system design (Aspen)
- Safety and risk assessments (HAZOP / FMECA)
- Compliance with EU directives (CE: Machinery directive / PED / ATEX / EMC)
- Detailed engineering (3D-CAD, ANSYS)
- Construction, assembly and testing
- Laboratory and test equipment
- Installation, commissioning and acceptance testing (FAT, SAT)
- Project management

Materials capabilities

Stainless steel, aluminium, titanium, tantalum, hafnium, tungsten and molybdenum (injection molding), ceramics

Selected references

CEA – Philips – ASML – Bosch – Fokker Aerostructures – Bosch – Océ – Shell – Nuclear Research and consultancy Group (NRG)



Jaco Saurwalt
Director

Westerduinweg 3
1755 LE Petten
T: +31 (0)224 56 46 61
eee@ecn.nl

www.ecn.nl/em

ECN

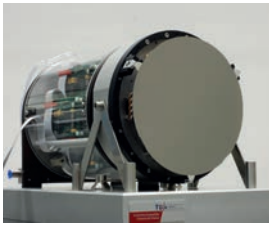
Entechna Engineering

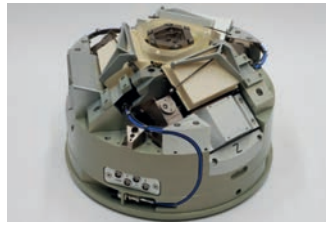
Entechna has been serving the high tech industry and academia with high-quality solutions in the field of mechatronics and mechanical engineering since 2010. Our extensive background in academic level Design Principles and experience with optical and electromagnetic systems allows us to quickly reduce complex problems to their essence. From here on we generate creative and innovative solutions without wasting time on symptom solving or losing sight of practicality and cost.

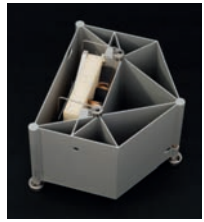
Our projects range from fast feasibility studies to extensive concept-to-prototype developments and turn-key instruments. A common theme is the large technical complexity which suits our role as lead engineer or system engineer perfectly. Additionally, we have experience with documentation and manufacturing aspects of big-science projects and complex industrial machines.

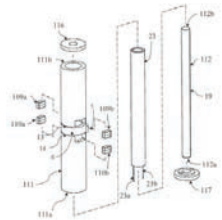
To summarize: if you need mere manpower, we may not be your best choice. However, if you need brainpower, give us a call!

A selection of our customers:
SRON – TNO (ESO) – Trioptics GmbH – Demcon – VDL (ESO) – Mecon – VSL – Eindhoven University of Technology – Abbott – High Tech Institute and several semicon equipment companies.







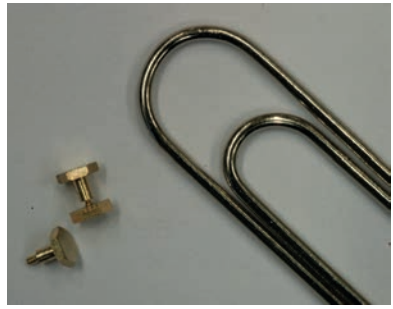


Dr. ir. Roger Hamelinck
Dr. ir. Chris Werner

Horsten 1, MMP 1.02
5612 AX Eindhoven
T: +31 (0)40 236 41 52
E: info@entechna.nl

www.entechna.nl

ENTECHNA
ENGINEERING



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 (0)651 49 46 73
E: michael.koot@irmco.nl

Demcon Advanced Mechatronics

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 (0)881 15 20 00
E: henkjan.van.der.pol@demcon.nl

Turnover: 20 M€ | 140 employees

www.demcon.nl

DEMCON

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.

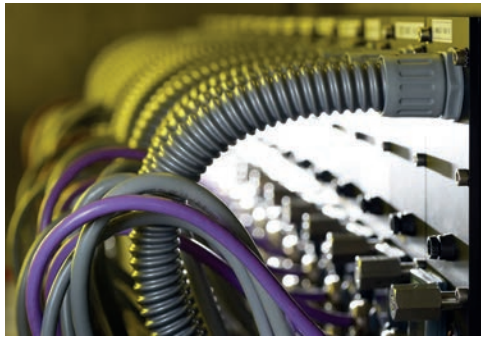
Edwin Langerak
Senior Project Developer

P.O. Box 12
5670 AA Nuenen
T: + 31 (0)402 63 50 00
E: edwin.langerak@ccm.nl

95 employees

www.ccm.nl

centre for concepts in mechatronics



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 (>1000m^2) – Vacuum cleaning – (U) HV and UCV knowledge– Surface Treatment

Jos Oldereuver
Sales Manager

Galileistraat 2
7701 SK Dedemsvaart
T: +31 (0)523 61 22 58
E: j.oldereuver@pmbearings.nl

www.pmbearings.nl

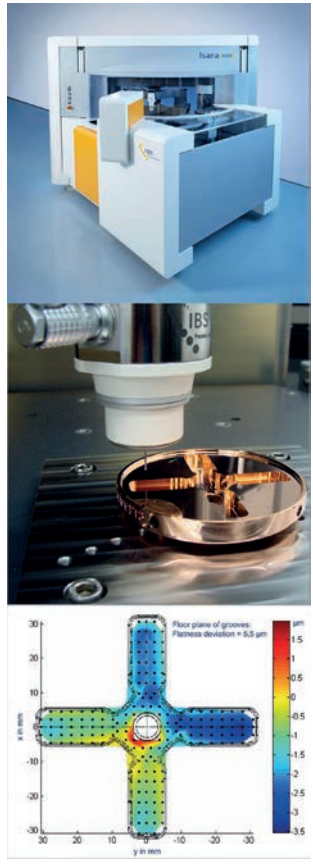
IBS Precision Engineering BV

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 (0)402 90 12 70
E: info@ibspe.com

www.ibspe.com

IBS Precision Engineering

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 .

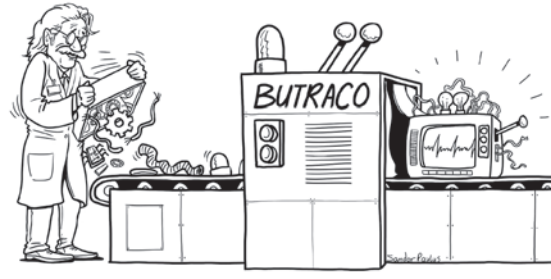
Mr. P. (Pim) Buters
Director

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

www.butraco.nl

BUTRACO

expierenced in machinebuilding



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
Sales

Stedenbaan 15
5121 DP Rijen
T: +31 (0)161 24 47 50
E: d.wiersma@kin-machinebouw.com

www.kin-machinebouw.com

KIN *machinebouw*

0501

Raw materials, (semi-) finished products

0501 Raw materials, (semi-) finished products	Company size	Speciality (USP)			Area														
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							service	Systems Engineering	Technical consultancy	supply	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware	Project management			system supplier					
Telmastaal		excotic steel and alloys; custom products	0501;	supply and maching exotic alloys & stainless steel	x	x								x					x	
Mat-tech BV	S	metallurgy; analasis; joining; alloys	0501; 050405	brazing large/small series; SEM; Xray;	x	x								x			x	x	x	x
3D Metal Forming	S	metal forming/ bonding	050101; 050103; 0504	predictive controlled explosion	x															
Tebunus Tube Bending	S	custom bended tubes in exotic materials	050102;	CNC tube bending and welding; small radius	x												x	x	x	
Velmon Lastechniek	S	stainless steel pipe sections and joints	050102;	manufacturing; orbital welding; X-ray/helium test				x	x									x	x	
Metrik Fasteners		special fasteners	050106; 050208	Off the shelf & customized fastners and studbolts										x				x	x	
Kersten plastic coatings	S	high-value, high-quality coatings to metals	0502; 050404; 050203; 05040410	thermal/fluid bed/ electrostatic/powder/ rotomoulding															x	
BKB Precision	S	plastics machining, assembly	0502; 05040501	high performance plastics		x								x					x	
Louwershanique	S	ceramic glass-metal UHV feedthroughs	0502; 06010606; 050405	machining technical glasses and ceramics		x		x	x								x	x	x	
Benecom	S	rubber to metal; any material combination	0502; 060110; 06020307	cutomized gaskets; molded parts; Orings; PTFE; Vulcolan				x	x									x	x	
Futura Composites BV	M	production of composites	050204; 05040502	taylor made composites					x					x			x	x	x	x
VDL Fibertech	M	composites for high demanding solutions	050204; 05040502	engineering; large series; small/large sizes														x	x	

Telmastaal Telmastainless

The strength of Telmastaal and Telmastainless lies in the fact that they complement each other in the way they offer total solutions to each demand concerning steel and metal components.

- Telmastaal provides their customers with high quality steel, precious metals, copper, special alloys. Furthermore Telmastaal provides her clients with professional advice and expertise.
- Telmastainless is the specialist in custom products of high quality stainless steel and nickel based alloys.

We offer a total solution for your application and have lots of experience in material handling thanks to the experienced staff and a large network of producers. Our daily business is to take care of and provide the best possible handling of your assignment. We supply material to various industries including:

- Automotive
- Energy
- Medical
- Aerospace
- Offshore

For further information please refer to our website for an overview of our complete product range.

Wendy van Ree

Bredesteeg 4
7041 GV 's-Heerenberg
T: +31 (0)314 66 49 00
F: +31 (0)314 66 46 36
E: verkoop@ttlgroup.nl

www.ttlgroup.nl

TELMASTAAL
TELMASTAINLESS

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.

Mo Biglari
Technical Commercial Director

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

www.mat-tech.com

mat–tech
innovative soldering & brazing

3D-Metal Forming

Product information

3D-Metal Forming B.V. is specialized in metalworking by the use of dedicated explosive materials. New production processes are developed within the company by using CAD, FEM simulations and photogrammetry.

Explosive bonding makes the joining of unique metal combinations possible, such as molybdenum to copper or tungsten to CuCrZr.
3D-Metal Forming B.V. is your partner in developing new solutions.
We can provide a full process and manufacturing chain including e.g. explosive bonding, machining, brazing, electroplating, HIP etc.

Explosive forming provides complex double curved shapes, formed from sheetmetal.
The possibilities in size, shape, metal and sheet thickness are almost unrestricted.
Only one tool part (comparable to a lower die) is needed so that Non Recurring costs are kept to a minimum.

3D-Metal Forming B.V. serves customers Worldwide in the markets Big Science, Energy, Aerospace and Architecture.
We continuously develop new, innovative solutions. For example, the development of the explosive forming of large, 60 mm thick stainless steel plates for the ITER vacuum vessel led to the development of an integral Nose Fuselage for Airbus. This component is explosive formed out of one, 100 mm thick aluminum plate, and fully machined after explosive forming. For Airbus this results in significant weight reduction of the Nose Fuselage structure.

References

RES (Cadarache): explosive formed panels of the water basin – ITER (F4E): explosive bonded CuCrZr-stainless steel tube transitions – ITER (RFX): explosive bonded molybdenum to copper, machined and warm formed – MAST (Culham, UK): explosive formed cans for poloidal field coils

Hugo Groeneveld
Manager R&D

Kolkweg 6
8243 PN Lelystad
T: +31 (0)152 15 32 00
E: hugo@3dmetalforming.com

www.3dmetalforming.com

3D-Metal Forming

Tebunus Tube Bending

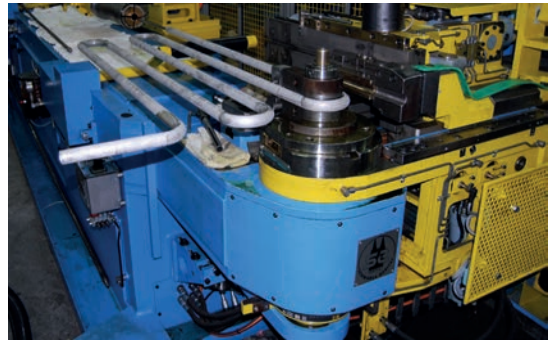
Tebunus stands for Flexible With Metal.

Tebunus Tube Bending can handle all bendable materials, such as carbon, stainless steel, grinded/ polished steels, copper, aluminium and other exotic grades. Tebunus is a powerful business partner. The number of industries in The Netherlands and abroad that call upon our expertise in bending technology and related operations, is still increasing.

Tebunus Tube Trading provides heat exchanger and condenser tubes with an outside diameter of 9.53 up to 50.8 mm. We deliver lengths up to 22 meters of both welded and seamless steel types, such as carbon alloy, nickel alloy, titanium, stainless steel and copper alloys. The chemical and petrochemical industries apply custom made U-tubes (or hairpins) in heat exchangers and condensers, pressure vessels and reaction vessels.

Tebunus Tube Trading has many years of experience and offers the requested craftsmanship. Our fully automated CNC (computer numerical control) controlled bending machines guarantee excellent accuracy and optimum durability. We bend according to VGB quality standards; wall thickness and ovality are standardized. Because of our short and efficient communication lines, we deliver high quality on very short notice.

Tebunus Tube Bending BV & Tebunus Tube Trading BV



Mieke Genefaas
Managing Director

Nijverheidsterrein 11
1645 VX Ursem
T: (0)031 725 0448 88
E: sales@tebunus.nl

www.tebunus.nl

Tebunus
FLEXIBLE WITH METAL

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

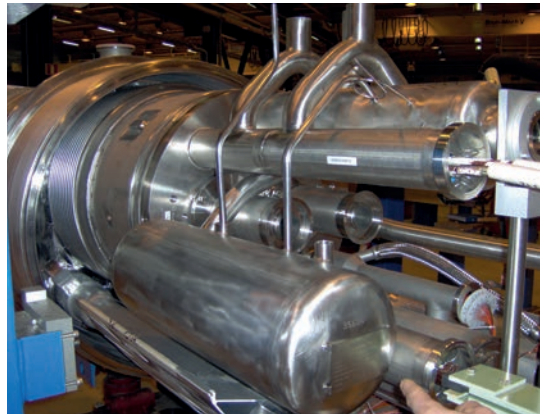
CERN – Corus steel – TEVA Pharmachemie – Trelleborg – Klinger-Picoff – Kenz-Figee – Tekoma – Cofely

Bert van der Velden
Managing director

De Trompet 1121
1967 DA Heemskerk
T: +31 (0)251 20 07 76
E: lastechniek@velmon.nl

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

www.velmon.nl



Metrik BV

Passion for fasteners; distributor and agent
Metrik Fasteners is a new player in the field of fastening technology and -distribution. Started as a distributor of standard fasteners, Metrik Fasteners has recently acquired,as part of the expansion of our strategic focus, three agencies of European producers in special fasteners and studbolts. This enables Metrik Fasteners to focus on three main product groups: Standard Fasteners, Special Fasteners and Studbolts.

Standard Fasteners
In close cooperation with the West-European market leader (Germany), Metrik Fasteners offers a wide range of industrial fasteners.
Our stock includes 80.000 items, available in all dimensions and surfaces, both Metric as ANSI!

Special Fasteners (agencies)
TS-Verbindungsteile GmbH is a state of the art production plant in special fasteners!
More than 300 different steel sorts are held in stock (Hastelloy, Inconel, Nimonic, 254SMO, Titanium, etc).
These products come in more than 100.000 different shapes and sizes: produced according to DIN/EN/ISO/ANSIO/BS/AS standards, or manufactured according to customer drawings or samples.
TS products are approved and certified by all recognized testing agencies (TÜV, ABS, BV, DB, DNV, GL, KWU LRS AND NV).
Vial Freres is a manufacturer of bolts and nuts in carbon- and stainless steel. Vials specialism is hot-forging, anchor rods and heat-exchanger plugs.

Studbolts (agency)
Zobel is a solid partner in the production and distribution of studbolts and jackscrews. We can guarantee short lead-times because our 400 tons of semi-finished and finished products: (A193, A194, A320, A453, etc).

References
Siemens – Alstom – SNCF – GEA – Edilon – Bronswerk – Cofely – Heerema – Mokveld Valves – Enecogen – GDF-Suez – Airpack

Rik Visser
Director

Wormerweg 6
1311 XB Almere
T: +31 (0)36 737 05 28
F: +31 (0)36 737 03 98
E: info@metrik.nl

www.metrik.nl
www.ts-verbindungsteile.de
www.zobelh.com
www.vial-freres.com

Kersten Kunststof(f)coating

We have been applying high-value, high-quality plastic coatings to metals since 1967. We use thermal processes to apply these coatings at our production locations in Brummen (NL) and Kahla (D). We apply coatings using fluidized beds, electrostatic powder coating and rotomoulding.

Solutions

A plastic coating is much more than just a protective layer. The specific properties of a coating determine where applying it is desirable or required. This summery shows you the solutions offered by our various coatings:

- Corrosion protection
- Non-stick properties
- Insulating and conducting coatings
- Flexible coatings
- UV-resistant coatings
- Certified coatings

A variety of applications and sectors

Kersten Kunststof(f)coating provides solutions in many sectors. Our customers are largely in the drinking water production, process and chemicals, semiconductor, mechanical engineering and pharmaceuticals sectors.

What can we do for you?

Every plastic coating has properties that makes it suitable for specific applications. Here is an overview of the coatings that we use:

- Rilsan®
- Halar®
- Xylan®
- PTFE, FEP, PFA and ETFE
- Resicoat®
- Abcite®

Henk van Dijk
Managing director

Vulcanusweg 2
NL-6971 GW Brummen

T: (+31) (0)575 56 15 00
E: info@kersten-bv.nl

www.kersten-bv.nl

Kersten Kunststof(f)coating

BKB Precision

BKB Precision is a reliable partner in high performance plastics machining for 35 years. We process so-called high performance plastics or engineering plastics accurately to a precision of up to 3 µm. BKB Precision is ISO 9001:2015 certified.

State-of-the-art machinery

We boast state-of-the-art machinery in our fully conditioned production hall, whether or not with robot loading. This gives BKB Precision the capability to flexibly respond to peaks in demand because our machinery can operate 24/7. We also make the necessary investments to keep our machinery up to standard.
We have a wide range of CNC machines, from three-axle milling to complex five-axle simultaneous milling or even 7-axle-milling and turning machines:

- Okuma lathing-milling combinations: lathing and milling from ∅10 mm to ∅100 mm, up to 3 µm accuracy.
- Five-axle simultaneous milling machines: we have a number of CNC milling machines (Hermle) to five-axle mill complex, including robots.
- Portal milling machines: our impressive machines can work very accurately, with 0.02mm accuracy over a length of over 6,500mm.

Compositing, packaging, testing, cleaning

Assembly, packaging, testing and cleaning is an important part of our manufacturing process.

- Cleaning: cleaning parts and products is done with care; we work according to a strict protocol. In our cleanroom, plastic products are cleaned according to the Grade 2 norm (ISO class 7 certification).
- Compositing plastic: we have the following possibilities available: mounting, gluing and/or welding.

Markets

We active in a wide range of market segments, such as the following:
High-tech – Semiconductor – Medical – Defence – Food – Aerospace – Optical and Chemicals.

References

CERN – ASML – PSI – Storz Medical – Philips – Thales – VDL-ETG – Airbus DS

Berrie van de Burgt
Sales director

Ekkersrijt ‘Science Park’ 5208
5692 EG SON
T: +31 (0)6 25 42 36 63
E: b.vd.burgt@bkbprecision.com

www.bkbprecision.com

LouwersHanique BV

LouwersHanique is a leading specialist in the development and manufacturing of high-end solutions in the field of the thermal and mechanical processing of technical glass and ceramic materials. The company activities also include the bonding and [clean room] assembly of unique material combinations based on an extensive range of bonding and integration technologies. The main company focus and strength lies with low volume – high mix niche solutions for high-end applications and leading edge industries and customers driving todays and tomorrows technological progression.

One of the main activities is the development and manufacturing of electrical and optical feed-throughs.
Our electrical and optical feedthroughs offer hermetic and electrical isolation in Ultra-High Vacuum (UHV) and High Pressure applications with a lifetime leak-free performance from Cryogenic temperatures up to 500 degrees C. We apply proprietary glass-to-metal binding technologies to directly seal pins and other components into the metal flange without laser welding or other sealing technologies. No local thermal stress will occur and virtual leaks are absent. With our technology we can make use of standard flanges as well as custom designed parts and assemblies, exceeding the limitations of existing technologies.
Based on a modular concept we can integrate low noise Coaxial, High Power/High Voltage optical and other feedthroughs in Flanges and modules without the need of laser welding with extremely high integration levels. In-house cleanroom assembly, process control and state-of-the-art surface finishing and cleaning equipment guarantee flawless surface texture and topography for the most demanding applications. To ensure that all products are leak tight LouwersHanique has the newest testing facilities available as Helium testing equipment, RGA detection equipment, ultrasonic cleaning and 3D measurement systems (CMM) including white light interferometry for nm accurate surface inspection.

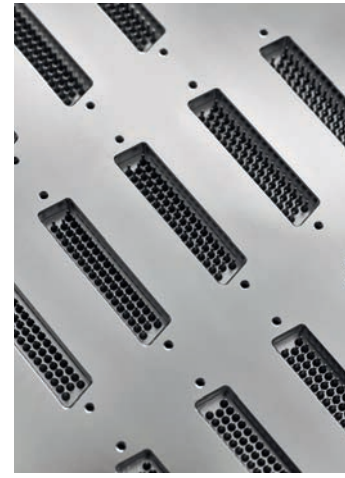
The company implemented World Class Manufacturing, JIT and 5 S best practises resulting in 100% process and quality control thus leading the highest possible QLTC reliability and overall product value for the lowest integral costs. This, combined with our highly skilled and motivated workforce of over 110 technicians enables us to produce components and solutions of consistent and high quality on time, every time.
LouwersHanique is located in the High Tech Brainport Region of the Netherlands and is ISO 9001:2008 certified by TÜV

Carel van de Beek
Accountmanager

Energieweg 3a
5527 AH Hapert
T: + 31 (0)497 33 96 96
F: + 31 (0)497 386 372

www.Louwers-Hanique.com

LouwersHanique



Benecom

We introduce our company, which is already more then 50 years active in supplying, amoung others, the high demanding markets like Aerospace, Energy and medical also more general industry like Sanitary, Pumps, Hvac, and so on.

Our Products

Of course O-rings and Molded parts are within our scope of working, but also we realise, in cooperation, new designs. We have a lot of experience in rubber to metal or other base material combinations.

Produced in all kind of materials,

Rubber compounds	– SBR, NBR, EPDM, SILICONE ,FPM (VITON), KALREZ…..
Synthetic	– POLYPROPYLENE, POLYAMIDE, HYTREL, POLYETHYLENE..
Gaskets	– HD300, KLINGERSIL, FIBRE, NOVAPRESS…
Various	– PTFE (TEFLON), FOAM MATERIAL, VULKOLAN..

Proven quality compounds with DVGW, KTW, WRAS, FDA, NSF Certificates.

We have our own KIWA and KOMO compounds with certificates.

International working is standard for us in buying possibilities. Exporting our goods is common business and with our experienced staff we always find a workable solution for your demands.

Randweg 24
2941CG Lekkerkerk
T: +31 (0)180 66 13 99
E: info@benecom.nl

www.benecom.nl

Futura Composites BV

Specialists in Fibre reinforced Composites

Components for products of the future. That is what Futura Composites produces. As a specialist in fibre reinforced composites, we are a reliable partner for all manufacturers of high-grade technical applications.
Futura Composites operates at the very highest technical level. We supply products of high-grade material according to unusual designs, which require extensive engineering work and are produced using highly advanced techniques. An extremely high delivery reliability complements the picture.

Technology

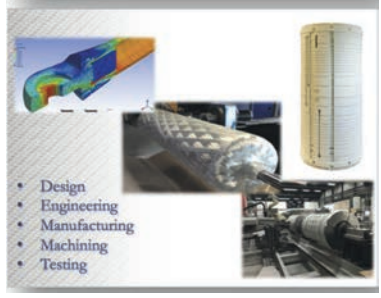
Futura Composites offers solutions for the technological challenges encountered by specific clients. We do not supply standard but only tailor-made products. Each product we make requires some measure of innovation. That is why creativity is central to our working methods.
Futura Composites performs the entire production process in-house, from design and engineering to production and testing. For this reason, too, we can guarantee the very highest quality.
Futura Composites is certified Iso 9001:2008 / Iso 14001:2004 / Iso13485:2003

Production techniques

- Filament winding
- Prepreg (In and out of Autoclave)
- Resin Infusion
- Sandwich Construction
- Resin Transfer Moulding (also Vacuum Assisted)
- Machining Composites
- Testing Composites

Materials

- Epoxy
- Phenolics
- Glass Fibres (E-R-S)
- Carbon Fibres (HM/ HS – Pitch /PAN)
- Aramids
- Dyneema



Martino Borgo
Managing Director

Marconistraat 40
1704 RG Heerhugowaard
T: +31 (0)72 57 15 88
E: futura@futuracomposites.nl

www.futuracomposites.nl

Futura
Specialists in fibre reinforced composites

VDL Fibertech Industries

"VDL Fibertech industries is your partner in providing large series of state-of-the-art composites for high tech demanding solutions. Our fully equipped engineering team builds on decades of experience combined with efficient and the latest composite production technologies."
"VDL Fibertech industries is your partner in providing large series of state-of-the-art composites for high tech demanding solutions. Our fully equipped engineering team builds on decades of experience combined with efficient and the latest composite production technologies."
VDL Fibertech Industries is one of the oldest composite companies in the Netherlands. Through cooperation with the customer we look at countless of possibilities that composites offer to create a product that offers a substantial added value to a variety of products.
Our production facilities make it possible to produce both very small and very large sizes (3 x 5 m), combined with a typical series size from a few dozens per year to ongoing large series. The end result is a product that we are proud of and from which you can achieve enormous benefits in your application. ISO14000, ISO13485 and UL certificates guarantee our high and constant quality of work.
As part of VDL Group and building on 40 years of experience we have a lot of experience within our walls. Combine this experience with our state-of-the-art production facilities and team of experienced engineers and the outcome will be a composite that we can be proud off. A composite product that will bring you added value.

Engineering
- >90 jaar cumulative experience
- Pro-E
- Abaqus FEM

Production
- 12.400 m^2 Production surface including cleanroom
- 2D Fiber Cutter
- Gelcoat/Paint Cabins
- Robotized pre forming
- Hot pressing
- RTM up to 2x4 meter
- VAR RTM up to 3x5 meter
- Continue Sandwich Panel production (Acrosoma®)
- RIM
- 5-axis CNC + Robotized contouring
- Robotized Assembly

Quality
- ISO13485, ISO14001
- 3D CMM
- X-Ray/NDT
- Pullbench
- 3D Laser radar

Michiel Wassink
Managing Director

Hallenweg 15
5683 CT Best
T: +31 (0)49 93 67 676
M: +31 (0)6 218 821 69
E: m.wassink@vdlfibertechindustries.com

www.vdlfibertechindustries.com

VDL Fibertech Industries

0503
Fabrication equipment, tools and accessories

0503 Fabrication equipment, tools and accessories	Company size	Speciality (USP)			Area							service	supply						
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
Deerns		purity and contamination control	050305; 13	projects. service and support										x			x	x		
Carl Zeiss Industrial Metrology		measuring machines and services	050306; 0590	CMM							x		x							x

Deerns Nederland B.V.

Deerns delivers solutions for facilities where contamination control is paramount. Our experts have decades of expertise and experience in developing, designing and putting into operation contamination controlled research and manufacturing facilities.

We have developed a design methodology that puts our client's processes at the center of the design. This approach is crucial in achieving successful solutions that effectively integrate all aspects of operations, processes and equipment within the corresponding facility, supporting systems and technical infrastructure. Our projects include every type of research and production space, both new and renovated, providing improved efficiencies, flexibility, and people-centered spaces that meet twenty-first century technical standards.

References

ASML – AMOLF – Nikhef – IMEC – Danone – Dokuz Eylül University – DSM – MESA+ –– Philips – SRON – University Eindhoven – NXP – Bayer – ARCNL

Our Clean Technology Services

- Project Programming
- Project Management
- Design and Engineering
- Construction Supervision
- Qualification & Validation
- Hook-Up
- Operational Support

Erwin Beswerda
Corporate communications

Fleminglaan 10
2289 CP Rijswijk
Postbus 1211
2280 CE Rijswijk
T: +31 (0)883 74 00 00
F: +31 (0)883 74 00 10

www.deerns.com

Deerns

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.

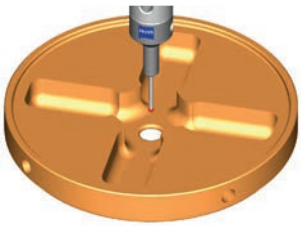
Metrology Solutions

Automotive – Machinery – Aerospace – Medical – Energy – Plastics

Albert Drenth
Business Unit Manager

Trapezium 300
3364 DL Sliedrecht
T: +31 (0)184 43 35 51
E: info@zeiss.nl

www.zeiss.nl



0504
Fabrication technologies

0504 Fabrication technologies	Company size	Speciality (USP)			Area							service			supply					
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
IGS GeboJagema		machining large and small series	0504;	high precision and moulds; engineering	x	x								x				x	x	
Bodycote Vacuum Brazing	M	metal parts	0504; 050304; 06	vacuum brazing; heat treatment	x	x		x	x								x	x	x	
Landes High End Machining BV	M	high precision machining, assembly	0504; 050401; 050402	precision parts; machining S/L series; assembly	x	x												x	x	
Precision Mechanical Prod.	S	ultra precision mechanical components	0504; 050402; 0501	CAD/CAM; CNC machining of super alloys & titanium															x	
Boessenkool B.V.	S	systems; machinery; structures	0504; 0590	general machining & assembly	x	x	x					x		x		x	x	x		
Bouman Machine-fabriek		systems; machinery; structures	0504; 0590	general machining & assembly	x	x	x					x	x		x		x	x	x	
FMI High Tech Solutions	L	mechanical parts& systems supplier	0504; 0590	general high precision machining	x	x	x	x	x						x		x	x	x	x
Geurtsen Machine-fabriek	M	mechanical parts& systems supplier	0504; 0590	high precision machining;3D Metal printing;welding		x						x			x		x	x	x	x
Germefa		mechanical parts& systems supplier	0504; 0590	general high precision machining	x	x	x	x	x						x		x	x	x	x
Mevi Fijnmechanische Industrie	M	mechanical parts & systems supplier	0504; 0590	submicron machining engineering motioncontrol		x	x		x						x		x	x	x	x

0504 Fabrication technologies	Company size	Speciality (USP)			Area							service		supply					
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
Nijdra Group	M	mechanical parts & systems supplier	0504; 0590; 06020100; 0602 0102; 06 020103; 06020105; 06020206; 06010806	general high precision machining & engineering		x	x	x	x					x	x		x	x	x	x
Van Halteren BV	M	systemsupplier; machinery; structures	0504; 0590 060102; 060102	general precision machining&assembly	x	x	x		x			x			x		x	x	x	
VDL Enabling Technologies Group	L	systemsupplier; machinery; structures	0504; 0590	development/ projects/ machining	x	x	x		x	x	x	x			x		x	x	x	x
Airbus Defence and Space Netherlands	M	systems engineering; space	0504; 0590; 350; 04; 06	system suplier; remote handling			x	x		radiation hard	x	x	x		x		x	x		x
Bakker Fijnmetaal	S	high precision machining, assembly	0504; 06	ultra precision parts; small-medium series		x	x		x									x	x	
Kusters&Bosch	S	high precision machining,assembly	0504; 06	precision parts; machining S/L series; assembly		x	x		x										x	
Vermeulen Metaal B.V.	S	high precision components & assemblies	0504; 06	certified welding/ sheet metal / precision machining		x												x	x	
Wilting	S	ultra high vacuum and cryogenic systems	0504; 06	high precision manufacturing		x											x	x		
Schelde Exotech	M	construction/ repair of reactors & vessels	050401; 050402; 060102	engineering & manufacturing special materials	x				x						x			x	x	
Bayards Aluminium Constructions	M	machinig, joining	050401; 06	complex aluminium constructions	x	x			x								x	x	x	

IGS GeboJagema

IGS GeboJagema, for over 65 years, we have been delivering high precision. Parts and moulds for some of the most successful products and industries. Many of the key players in the industry bring their toughest product challenges to IGS GeboJagema. That's because we provide the solutions they need to help them innovate new products.

Our problem-solving mindset, proven track record in high precision machining experience and meticulously methodical way of working ensures you the highest quality, process control and traceability needed for
your products.

What makes us different

Proven track record and know-how to help you push the boundaries on high precision parts and create new innovations

- Engineering power that helps you make seemingly impossible components, quickly and cost-effectively
- Design for Manufacturing support to improve the Manufacture ability of your products
- Meticulous process control of quality, validation and traceability to meet the strict standards for high precision parts
- High volume capabilities to produce small series multiple parts at once to meet high volume requirements and leverage economies of scale
- Financial stability as part of a large and solid group, that guarantees secure support during the entire lifetime of your product
- After sales support to offer a full warranty on all our products to guarantee a long productive lifetime.

Okuma Multus B300II with Robot

Jan-Willem den Hollander
Buisiness Development Manager

Esp 430
5633 AJ Eindhoven
T: +31 (0)40 264 75 00
F: +31 (0)40 264 75 91
E: jw.denhollander@igsgebojagema.nl

www.igsgebojagema.nl

IGS GeboJagema
eye for precision

Clanroom Class 7 for assembly of high precision parts to modules

Bodycote Vacuum Brazing

Bodycote Vacuum Brazing has been engaged in advanced brazing techniques for about 40 years. During these years an extensive know-how and vast practical experience have been built, unique for the industry. Practically all types of base metal, filler metals and brazing processes are being applied to hundreds of different products. Bodycote Vacuum Brazing has several different types of brazing furnaces available for basic research, product development and production.

Bodycote Vacuum Brazing is ISO 9001, ISO 14001 and ISO 50001 certified.

Product Information

In the high temperature brazing process joints are generated in a vacuum atmosphere. The combination of high temperature and reducing atmosphere ensures metal oxides dissociate at the product surface. The process results in very strong joints (90–100% base metal strength) Due to the automated furnace control these joints can be reproduced with a constant high quality.

Bodycote Vacuum Brazing Diemen provides the following services:
Vacuum brazing – Special heat treatments in vacuum or reducing atmosphere – Consulting for material selection and design of braze joints.

Materials regularly handled

Low and high alloy steels – Tool steel – Cast Iron – Stainless steel – Copper alloys – Titanium alloys – Superalloys – Carbides – Ceramic, composites, graphite

Markets served

Power Generation and Energy – Oil & Gas – Measuring & Control – High precision tooling – Lithography – Aerospace – Pharmaceuticals – Science/research – Plastic Moulding

Henkjan Buursen
Plant Manager

Bodycote Hardingscentrum BV
Bodycote Vacuum Brazing
Visseringweg 28
1112 AS Diemen
T: +31 (0)20 560 10 80
E: henkjan.buursen@bodycote.com

50 employees

www.bodycote.com

Bodycote

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

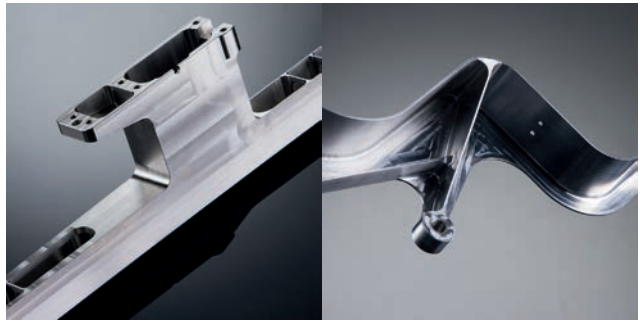
Aircraft- and Space industries, Defence (land systems, naval systems, air bound systems), Semicon industries, Optical industries, Medical equipment, Offshore industries, Special machinery.

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 (0)591 63 53 94
E: Peter.Boogaart@landes.nl

www.landes.nl

Landes
HIGH END MACHINING

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 (0)544 37 05 71
E: eric@pmp-nl.com

www.pmp-nl.com

PMP
Precision Mechanical Production

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. Eelco M. Osse
CEO

Tufkade 13
7602 PA Almelo
T: +31 (0)546 48 88 00
E: 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!

Bouman Machinefabriek BV

Our well thought-out working methods are recognizable ine verything we do.

Machine fabriek Bouman B.V. is supported by its own Engineering Department, to manufacture complex projects and products. Excellent planning and Project Management through one contact point makes itpossible that our cooperation is perfect and trouble free. Pick up thephone and contact Machine fabriek BoumanB.V.

Possibilities

- Engineering
- CNC turning and milling
- Welding and sheet metal working (Carbon steel and Stainless steel)
- Assembly special machines and modules

Unisign Uniport 6000

- 4-5 axis CNC milling + drilling machine
- x-axis : 8000 mm
- y-axis: 2500 mm
- Z-axis: 1000 mm
- table: 8000x2170 mm
- CNC table: Ø 2000 mm
- Free space portal 2500(y) x 1200(z)

THE MATTER IN HAND

Rob Geertshuis
Account Manager

Van den Broekeweg 15,
7602 PG Almelo
T: +31 (0)546 54 68 30
F: +31 (0)546 54 68 31
E: contact@bouman.nl

www.bouman.nl

Bouman
INDUSTRIAL SUPPLIER GROUP
BOUMAN MACHINEFABRIEK
BOUMAN PROCES TECHNOLOGIE

FMI HighTech Solutions

FMI HighTech Solutions is part of the FMI Group, with 10 companies, located in the Netherlands.
FMI HighTech Solutions designs, produces and assembles complete mechanical and mechatronic devises and complex modules.
The specialism within the FMI Group is the manufacturing of high-end parts with an accuracy of 2 microns.

Competences

Vacuum Technology, Motion, Optical, Precision Technology, Transport tooling, Material Handling, Vision systems, Robotics, Production of High-end parts, 3-D printing, Project Management

Products

Manufacturing of high-end parts (2 microns), High-end modules, Tooling equipment, Robot handling Vision systems, Proto-typing and volume production.

Quality

- ISO9001 QMS, ISO13485
- Loyd's certificate of re-marking
- Full traceable product document management
- Compliance & Risk management
- Advanced Product Management

Markets

Aerospace – Analytical – Leisure industry – Medical – Food – Oil & Gas – Semi-conductor – Solar.

References

Anteryon – Applikon – ASML – Carl Zeiss – FEI – JenOptik –Kulicke & Soffa – PSI – Thales – Twister – Vekoma

Henri Wijnants
Sales Manager & New Business Development

Liessentstraat 9-C
5405 AH Uden
M: +31 (0)6 15 18 90 23
E: h.wijnants@fmi.nl

www.fmi.nl

FMI
HIGHTECH SOLUTIONS

Machinefabriek Geurtsen B.V.

Combined expertise: At Geurtsen we know better than anyone that complex technical issues call for targeted solutions. That is why we put the concept of 'combined expertise' into practice in every possible way.

Specialists in machine construction

With its own design department, extensive and modern production facilities, and about 100 skilled employees, Geurtsen is able to develop and produce solutions for many technical problems. Our technical service department has about 30 service technicians to provide servicing, maintenance and repair at our customers' locations.

Competences

- Engineering
- CNC-milling (5-axis)
- CNC-turning
- Construction piping and skids
- Machine building
- Turnkey installation on location
- Service and maintenance
- Industrial supply
- Prototyping
- 3D Metal printing
- ISO 3834-2 certified welding MIG, TIG, Orbital
- NEN-EN 1090 certified constructions
- VCA (SCC) certification
- Organisation: ISO 9001:2015 certificate

Markets

- Chemical
- Pharmaceutical
- Food
- Neuclear
- Other

Frans van de Logt

Smyrnastraat 3
7413 BA Deventer
PO Box 600
7400 AP Deventer
T: +31 (0)570 62 11 59
F: +31 (0)570 62 19 37
E: f.van.de.logt@mfgeurtsen.nl

www.mfgeurtsen.nl

GEURTSEN
EMPOWERING TECHNOLOGY
SINCE 1926

Germefa

Greater precision provides countless new opportunities, whether noticeable or not. A good example of this is insect robots. For over a decade, scientists have worked on these minuscule robots, and now these robots, which weigh less than a gram, are ready to take to the skies. The applications are numerous; think of, for example, their possible use in disaster areas. That the production of these minuscule robots became possible, is due to recent breakthroughs in the fields of manufacture, design and materials. Manufacturing precision played an essential role in this development, needless to say.

The greater the precision and the higher the quality demands, the more we like the challenge at Germefa. We are continually striving to guarantee and further improve this accuracy and quality. This cannot be achieved overnight; we have been working on this process for decades.

Our precision and quality make us the perfect partner for companies in demanding markets, such as the medical/optical industry, aviation and aerospace as well as measurement and control.

As part of the stock market listed Aalberts Industries, we can also take over the entire production process for components, by integrally outsourcing other types of processing to our sister companies, for example, heat and surface treatments, deep hole drilling, engineering, casting processes, punching and vacuum brazing. This way, you retain one point of contact, but you benefit from all the processing options and expertise available within Aalberts Industries.

Germefa is also part of the Micro Machining Group, a group of suppliers of complex precision mechanical components and assemblies. See **www.micromachininggroup.nl/en/**
How can we contribute to your next great advance?

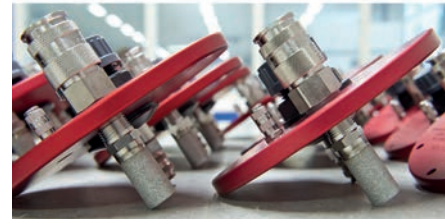
Markets
Medical/Optical – Aviation and Aerospace – Oil & Gas, Science – Defence – Automotive – Measurement and Control

Certification
ISO-9001-2008, ISO 13485

René de Vries
Sales Manager

Ivoorstraat 6
1812 RE Alkmaar
T: +31 (0)725 35 00 00
E: rdevries@germefa.nl

www.germefa.nl/en/



Mevi

Mevi means precision without compromise

Accuracy is Mevi's strength. Accuracy in everything from engineering to system supply, module construction, machining and test equipment. We can measure up to an accuracy of 0.6µm, and drill holes measuring just 0.02mm. That's Mevi for you. Our expertise is evident in every part of our company, from our extensive range of machinery to our over 100 specifically trained FTE's. It's thanks to all of these resources that Mevi has become a medium-sized partner with the capacity, knowledge and experience of a major player. But also one with the adaptability, determination and personal involvement of a small-scale organization. What this means in practice is that Mevi works extremely accurately, flexibly, and without compromising on quality. What's more, we like to taking on any challenge, regardless of its complexity. Whatever the challenge, we will build it.

Mevi specialises in:

- Engineering
- Production
- System supply
- Test equipment

Three machines; countless solutions

We will be happy to show you three of the machines that we're most proud of. However, these are only a few examples of all the machinery and technology at our disposal.

KERN Pyramid Nano

- Hydrostatic
- Mills to 1 µm, with repeat accuracy of 0.3µm
- Surface roughness of up to R_a 0.05µm achievable
- Automation of 3-R pallet system (in combination with FEHLMANN P95)
- 5-axis range Ø 160 x 160mm
- Speed of 50,000 rpm

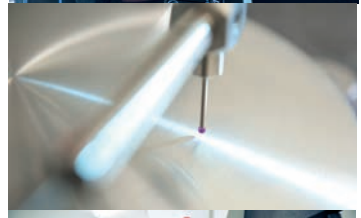
FEHLMANN VERSA 825

- 5-axis milling within 5µm
- Range Ø 500 H = 430mm
- EROWA automation system with 6 pallets of 400 x 400mm
- Speed of 20,000 rpm

Leitz PMM-C

- Calibrated to 0,6µm
- Range 800 x 1000 x 600mm
- Programmable with PC-DMIS

Interested in finding out how we can help you? Please contact us to discuss your requirements.



Anthony van Zeeland
Engineering Account Manager

Wethouder den Oudenstraat 1
5706 ST Helmond
T: +31 (0)492 53 86 15
T: +31 (0)6 52 58 43 07
E: avanzeeland@mevi.com

www.mevi.com

mevi ADVANCED TECHNOLOGY

Nijdra Group

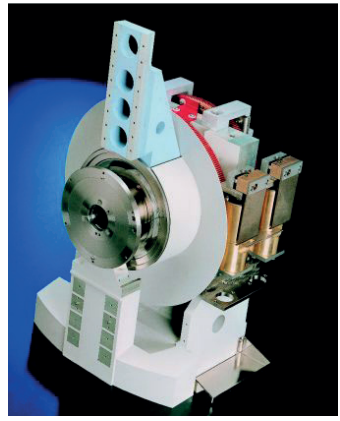
Precision is our profession, service is our passion!

Nijdra Group is a professional supplier specialized in high-tech precision components, complex (sub)modules and complete systems for the high-tech industry.

Nijdra Group cares for its clients' needs, from engineering, manufacturing, assembly and testing to supply chain management. Thanks to our extensive experience (since 1974) in the high-tech industry, we are capable of providing added value in any phase – from development to production, assembled and tested modules and machines. Furthermore, we provide our clients with support with their designing, guiding and producing a prototype as well as with the development from a prototype to serial production and assembly. We draw on our wide expertise in the field of manufacturability, scope of tolerance, use of materials, surface treatment, cost reduction, excellent quality and efficient assembly to achieve the optimum results for our clients.

Our range

- (Co)engineering
- Value engineering
- Production
- Supply chain management
- System integration
- Assembly
- Testing
- Our Quality:
- ISO 9001
- ISO 14001
- ISO 13485
- Testing facilities



Robbin van Zanten
Accountmanager

T: +31 (0)299 68 27 04
M: +31 (0)6 53 17 35 92
F: +31 (0)299 68 34 75
E: zanten.r@nijdra.nl

www.nijdra.com

Van Halteren Metaal B.V.

Van Halteren Metaal BV is part of the Van Halteren Group, an independent family owned business with various facilities in and outside The Netherlands. We aim for multidisciplinary projects where competences as advanced heavy machining, certified welding, assembly and commissioning are a requirement. Our production facilities comprises 12.000 Sqm., equipped with modern machinery and construction shop. Our staff is motivated, skilled and very experienced.

Markets

VHM serves a large variety of markets: Offshore, Big science, Shipbuilding, Defense, Sustainable Energy, Semi-conductors.

Competences

We manufacture components as well as complete assemblies

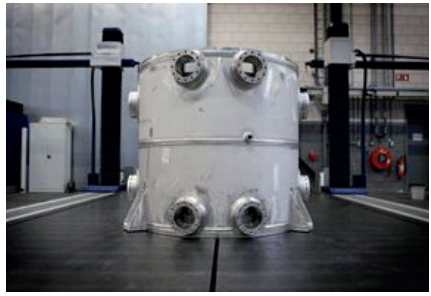
- Advanced machining 3-4-5- axis up to 20 meter
- Certified welding, ISO 3834-2, NEN EN 1090-2.
- Project management
- Assembly, Integration & Commissioning
- Engineering & development
- Quality assurance & control
- Electro-mechanical assemblies

Experience with CERN, HFML, ITER, ESRF, ESA

Magnet housings, MQFXB magnet parts, special tooling, components

Products

- Mechanical components
- Mechatronic assemblies
- UHV components
- Simulators systems
- High voltage switches



Marco Klitsie
Business Representative Special Projects

Kronkels 27
3752 LM Bunschoten
T: +31 (0)332 99 23 00
E: marco@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.

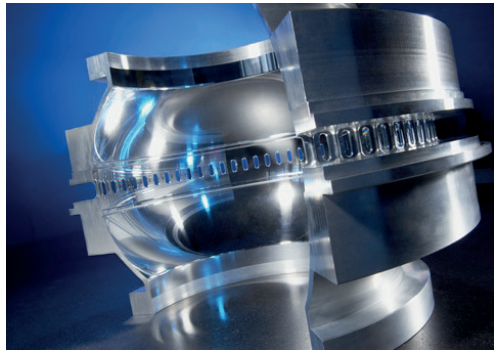
Product information
VDL ETG provides solutions based on its core competences: Precision Technology, Vacuum, Material Handling, Material Positioning, and Industrialization. This throughout the entire product life cycle: basic research, proto typing, ramp-up, volume, and end-of life.

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



Cees Coolen
Business Manager Science & Technology

Achtseweg Noord 5
5651 GG Eindhoven
T: +31 (0)40 263 88 88
E: cees.coolen@vdletg.com
E: hans.priem@vdletg.com

Turnover 2011 E500M | 1750 employees

www.vdletg.com

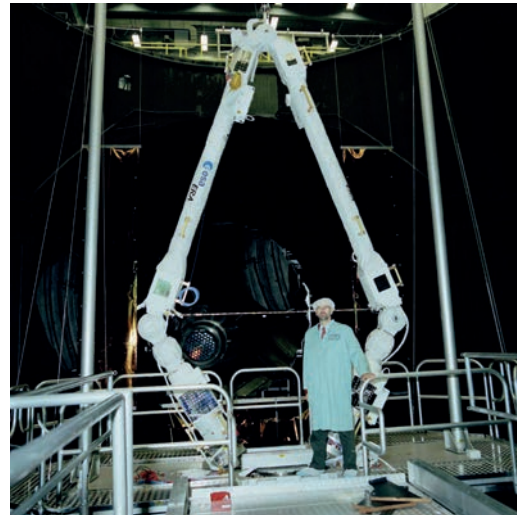
Airbus Defence and Space Netherlands

Airbus Defence and Space Netherlands B.V. is a supplier of high-tech products and services for the international aerospace industry. Since its founding in 1968, the company has contributed to many challenging space programs and has built-up considerable expertise in space technology in areas such as Earth observation, telecommunications and science. The Dutch organization is part of Airbus Defence and Space, a division of Airbus Group. The portfolio of Airbus Defence and Space Netherlands B.V., which employs more than 200 experienced professionals, includes solar arrays, launcher structures and instruments & systems. The company employs more than 200 experienced professionals.

Some examples of relevant achievements for Space and Science are:

- The European Robotic Arm for the ISS is one of the most comprehensive space projects ever executed in the Netherlands. ERA has been developed for ESA by a European consortium, led by Airbus Defence and Space Netherlands. The project provided valuable heritage for remote handling.
- Three major optical spectrometers for measurement of atmospheric gases have been built by Airbus Defence and Space Netherlands, partnering with TNO: Sciamachy on ESA's Envisat and the Ozone Monitoring Instrument on NASA's Aura mission have provided state-of-the-art data and key knowlegde of atmospheric processes. Their successor TROPOMI for ESA's Entinel 5 precursor mission is currently being calibrated and prepared for flight early 2016.
- Six optical delay lines were built and delivered to ESO's Very Large Telescope Interferometer in Chile

The Leiden-based space company is known for its, call it typically Dutch, approach: reliable, solution-driven, with a clear goal in mind, and always open to international collaboration.



Mr. Sytze Kampen
Head of Technology&Innovation

Postbus 32070
2303 DB Leiden
T: +31 (0)71 5245000
E: S.Kampen@airbusDS.nl

www.airbusdefenceandspacenetherlands.nl

AIRBUS
DEFENCE & SPACE

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.

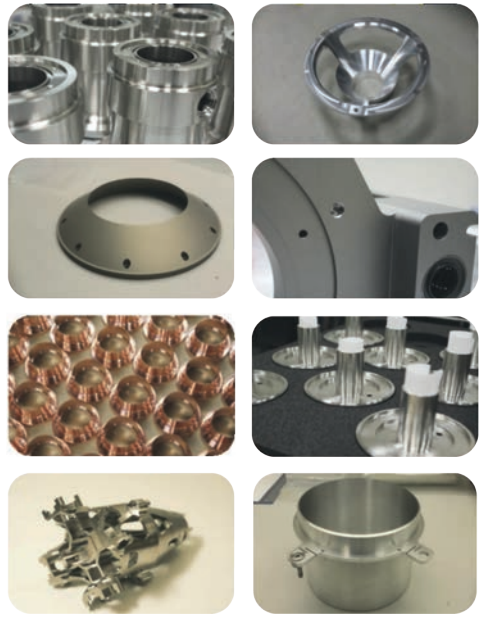
Bakker has an assembly hall and a clean room, class 10.000 where experienced professionals carry out assembly work. All the means required to clean and assemble products are in house available.

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
E: Dirk@bakkerfm.nl

www.bakkerfm.nl



BAKKER
fijnmetaal
precies, daarom

From 1 to 10.000 pcs, parts and assemblies!

Kusters & Bosch Fijnmechanische Industrie BV

We make precision parts and assemblies.

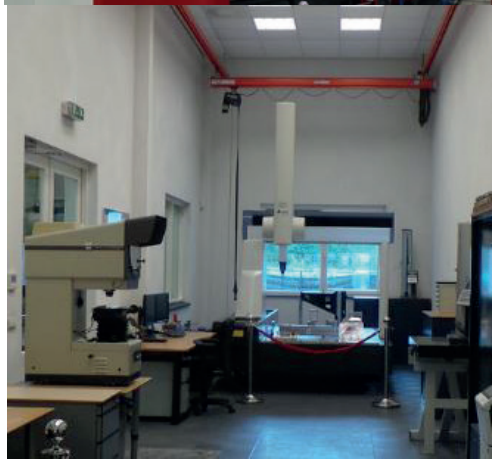
With a small enthusiastic team, a very modern machine park and over 25 years' experience in the making of machined precision parts we aim at a profitable and long lasting relation with our customers.

Specialties

- Precision (micron area) parts in all sorts of materials and (sub-) assemblies.
- Parts for vacuum applications.
- Series production

Capabilities

- Modern precision 5-axis milling up to 2000x 800x750 mm milling.
- Acclimatised measuring facilities with table size 1200x2000x1000.
- Experienced & enthusiastic team of 35 people.
- Used to work for large organisations.



Mr. T. Kusters
Director

Ambachtweg 27, 5731 AE Mierlo
T: +31 (0)492 66 19 36
F: +31 (0)492 66 54 63
E: tkusters@kusters-bosch.nl)

www.kusters-bosch.nl

kusters & bosch

Vermeulen Metaal B.V.

Vermeulen Metaal B.V. is your One stop shop for specials

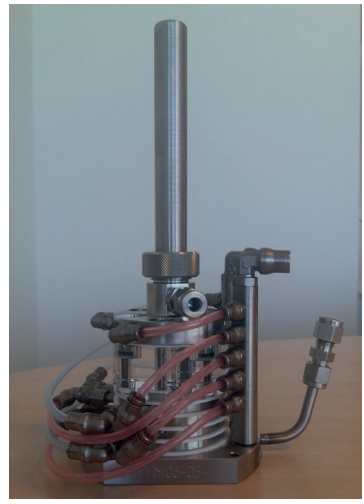
Engineering
- Solid works
- Inventor

Manufacturing
- Sheetmetal (all materials)
- CNC milling
- CNC turning
- CNC boring
- Piping (water, gas and chemical)
- Skidbuilding
- Certified welding

Assembly
- machine building
- machine parts
- on-site installation

References
OMT solutions – Cosign – Permobil France – Perfetti van Melle benelux – Solvay chemicals – Viro – Alstom – WML

Certified
ISO 3834-2
ISO 1090-1
ISO 9001 (under construction)



Peter Vermeulen
Director

Magnesiumstraat 35
6031 RV Nederweert
T: +31 (0)495 58 56 79
E: info@vermeulenmetaal.nl

www.vermeulenmetaal.nl

Vermeulenmetaal BV

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 (0)6 31 94 74 09
E: Adwin.kannekens@wilting.eu

www.wilting.eu

WILTING

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 (0)118 48 59 53
T: +31 (0)651 32 76 01
E: arthur.borsboom@exo.schelde.com

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

www.exotech.nl

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.

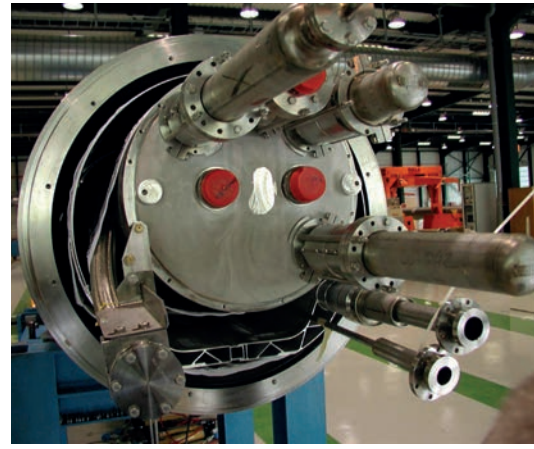
Please visit our website for more information and track records.

Ing. Dies W.S. Mackintosh
Managing Director

Veerweg 2
2957 ZG Nieuw-Lekkerland
T: +31 (0)184 68 30 00
E: dies.mackintosh@bayards.nl
Turnover: 25 M€ | 135 employees

www.bayards.nl

BAYARDS®
solutions in aluminium



050404
Special fabrication techniques for metals

0504 Fabrication technologies	Company size	Speciality (USP)			Area							service	supply						
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
A.J.B. Instruments BV		Machining, assembly	050404;	high precision components		x													x	
ECM Technologies BV	S	Non-conventional precision machining	050404;	high precision Electro Chemical Machining	x	x								x			x	x	x	
Etchform BV	S	Non-conventional precision machining	050404;	high precision etching & electroforming		x											x	x		x
INNPLATE		Electrochemical surface technology	050404;	electro plating/ forming; etching; polishing; etc.										x				x	x	x
Multivalent Plating & Etching BV	S	Electro plating & chemical treatment	050404;	etching; plating; cleaning; passivation; packaging		x		x	x										x	
Ter Hoek Vonkerosie Rijssen B.V.	S	Certified supplyer of high precision parts	050404;	EDM and laser microjet machining	x	x								x				x	x	
Hauck Heat Treatment		Non-conventional part treatment	05040406/ 09/ 10	heat treatment, surface CVD/PVD, brazing																
3D Worknet	S	Additive manufacturing	05040408;	3D printing		x														
Innogrind		Grinding technology and analasys	05040410; 05900307 ;0590	grinding; grind-ing burn analysis techniques;training	x	x								x		x	x		x	x
Admatec		Additive manufacturing	05040503; 05020202	3D printing of ceramics															x	
Ceratec Technical Ceramics BV	S	ceramic components	05040503; 05020202	machining/ casting of ceramics													x	x	x	
Formatec		Ceramic products and parts	05040503; 05020202	machining/ moulding/ bonding of ceramics													x	x	x	

A.J.B. Instrument B.V.

Over the past several years AJB has developed itself as a specialised supplier of high precision components and small assemblies to many high tech industries.

Technical and commercial support combined with advanced production facilities allow us to satisfy almost every customer's demand. In our facility we have everything from conventional lathes to 5 axis CNC milling machines with automation and 13 axis CNC lathes. We also offer additional process capabilities of grinding, wire erosion, honing, lapping and a cleanroom assembly facility. An environmentally controlled measuring room with 2 CNC measuring machines ensures the highest accuracy and reproducibility of your product.

Ijsbrand Dijkshoorn

Zuidzijde 7
3181 LR Rozenburg
E: sales@ajb.nl

www.ajb.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).

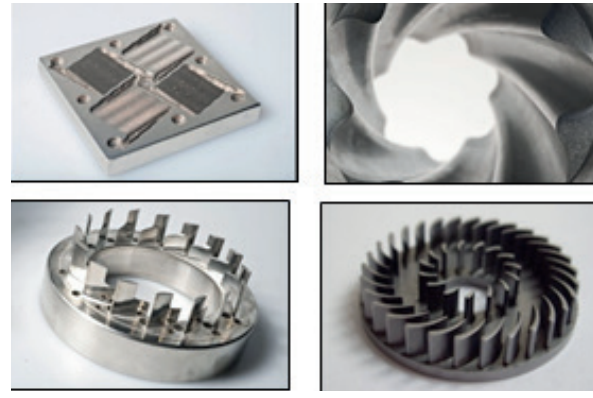
Precision Electrochemical Machining (pECM/ECM)

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 (0)622 37 97 50
E: wolters@electrochemicalmachining.com

Turnover: 1.0-1.2 M€ | 10 employees

www.electrochemicalmachining.com

ECM Technologies
Innovative Electrochemical Machining Solutions

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
E: info@etchform.com

www.etchform.nl

ETCHFORM

INNPLATE

Innovative and creative

We are the specialists in (electro)chemical surface technology: electroplating, etching, electrolytic and chemical polishing, electroforming, anodizing, colouring, chemical treatment, coating and cleaning.

In our 2000 m² of development laboratory we offer:

- Contract R & D
- Analysis and tests
- Consultancy & engineering
- Laboratory production and pilot shop

Markets

High Tech Industry – Aerospace – Defence – Solar – Medical – Additive manufacturing – Science

Quality

ISO 9001 – AS9100

Robbert de Greef

Fred Arendsen

Ekkersrijt 1501
5692 AN Son
T: +31 (0)40 751 52 49
E: info@innplate.com

www.innplate.com

INNPLATE®
SURFACE TECHNOLOGY

Multivalent Plating & Etching

Precision Electroplating and Chemical Treatment

- Fast delivery
- Prototypes and series
- High quality electroplating techniques

No standard job coater

We offer high-grade electroplating and chemical treatment for your product or application, according to specs or customised processes:

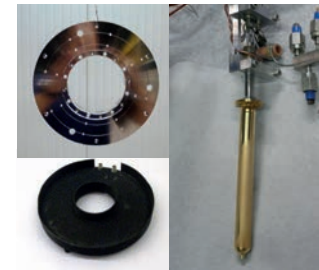
- (ultrasonic)cleaning, masking, cleanroom packing
- pickling and passivation (AMS-2700, AMS-QQ-P-35, DIN-EN2516)
- electropolishing and chemical polishing (ASTM-B912)
- nickel plating: matte (AMS-2424), bright
- electroless nickel (low-mid-high phosphor; AMS-2404, MIL-C-26074); nickel-PTFE
- copper plating: matte, bright, electroless
- tin plating: matte, bright tin (ASTM-B545; MIL-T-10727)
- zinc-nickel electroplating (DIN-50962)
- precious metal plating: silver, gold (AMS-2422, ASTM-B488-95, ISO-4523), gold-cobalt, palladium, ruthenium, ENIG, PPF
- blackening of copper (UN-D452) and stainless steel (MIL-DTL-13924)
- etching of aluminium, tungsten, molybdenum

Markets

High Tech Industry – Aerospace – Medical – Defence – Science

Quality

ISO 9001 – AS9100



Fred Arendsen

Robbert de Greef

Ekkersrijt 1501
5692 AN Son (near Eindhoven)
T: +31 (0)40 751 53 04
E: info@multivalent.nl

www.multivalent.nl

Multivalent® Plating & Etching

Ter Hoek Vonkerosie

Ter Hoek Vonkerosie – co-engineers with practical know-how
Completing orders for the construction and machining of tools and components whose complexity demands leading-edge solutions bordering onto the impossible is a challenge that Ter Hoek thrives on. With a high level of technical know-how and high-tech machinery, Ter Hoek has become the European market leader at the very highest level. Through co-engineering, Ter Hoek solves issues in which extreme dimensions, accuracy (to 1 µm) and materials play a major role.

The most important markets are the semiconductor industry, aerospace, medical industry, energy and offshore. For these high-tech industries Ter Hoek has distinguished itself as a 'problem solver' because it is able to translate a client's request into a technically practical solution. Using fully-acclimatised rooms.

Laser MicroJet technology

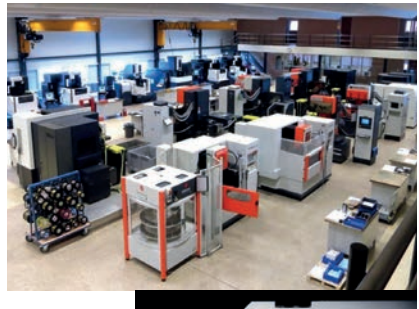
Ter Hoek has invested in an new technique, the Laser MicroJet technology from Synova enables it to machine non-conductive materials to within microns. This laser cutting technology is completely different from conventional lasers. As the laser is surrounded by a 30-µm water jet, no focus point is required and square edges are possible. This new technology substantially reduces the lead times for certain products.

Investments

Ter Hoek has also invested in three new EDM machines. The Form 400, Form 30 and the Cut 1000 from AgieCharmilles. The Form 400 is the largest die-sinking electrical discharge machine produced by AgieCharmilles and has a working range of X-900, Y-700, Z-500 mm; the weight of a workpiece can be up to 4,000 kg. Thanks to the special hole in the machine's clamping bed, which is Ø 650 mm and 750 mm deep, it is possible for workpieces to be machined vertically. The Cut 1000 is a special thin-wire machine for wire diameters of between Ø 0.02 and Ø 0.03 mm. Because traceability is becoming increasingly important for Ter Hoek, it has also invested in a laser engraving machine, which ensures optimum product traceability.

Higher level

In order to take the company to an even higher level Ter Hoek is currently undergoing AS9100 (aerospace) certification and is aiming to be granted its certificate in its 25th anniversary year (2015).



Gerrit ter Hoek
Director

Propaanstraat 1
7463 PN Rijssen
T: +31 (0)548 54 08 07
E: info@terhoekvonkerosie.nl

www.terhoekvonkerosie.nl

TER HOEK
vonkerosie

Hauck Heat Treatment Eindhoven B.V.

Introduction

Hauck Heat Treatment Eindhoven B.V. (H&ST) is a high-tech supplier of heat treatments, vacuum brazing and PVD or CVD surface treatments. Because of a high diversity in product-market applications combined with over 50 years of experience, H&ST is a reliable partner which is active in high tech industries like the aerospace, automobile, medical and semiconductor industry. H&ST distinguishes itself in the industry by: its clean rooms, wide diversity in equipment as well as processing materials, specific processes required by client and optimum care for the product.

H&ST is one of the most modern heat treatment companies in Europe, is located in The Netherlands in the city of Eindhoven and operates in high demanding markets. H&ST is part of Aalberts Industries N.V., a Dutch stock listed company and market leader in various market segments.
Most important values of H&ST are Quality, Technical solutions and Customer Care. No matter how large, complex, unique and innovative it may be the customers demands are, H&ST's co engineers are capable to deal and perform with any requests.

H&ST has three main activities:
- Heat Treatment
- Surface Treatment (CVD and PVD coatings)
- Vacuum Brazing

Heat treatment is H&ST's main business and is specialized in Vacuum Heat Treatments and the special diffusion process Stainihard (to harden the surface of Stainless Steel). Next to standard processes H&ST also provides very specialized treatments, geared to material, application, geometry and use.

Present quality systems are:
- NADCAP
- ISO9001
- ISO14001

References

ASML – Philips – VDL Enabling Technologies Group – Océ – Rolls Royce – GE – Snecma – Fokker

Steffen A.S. Schneiders
Sales & Marketing Manager HT Benelux

Achtseweg Noord 5, Building AL
5651 GG Eindhoven
T: +31 (0)40 266 30 00
F: +31 (0)40 266 30 03
E: info@h-st.nl

www.h-st.nl

HAUCK HEAT TREATMENT EINDHOVEN

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

PhilipsConsumerLifestyle–PhilipsLighting–KLPD–RobertBoschPackaging–VUmcFMT–UMCUtrecht–ESA / ESTEC – Plasticum Group and many more

Sander Smit
CEO

Maxwellstraat 21
6716 BX Ede
T: +31 (0)318 76 90 77
E: info@3dworknet.nl

www.3dworknet.nl

3D WORKNET
the mass customization 3D printing company

INNOGRIND

Innogrind applies more than 35 years of grinding technology know-how to solving the challenging problem of grinding burn. Using high-end measurement and analysis techniques such as Barkhausen Noise Analysis and X-ray diffraction, we are able to investigate and understand the dynamics of specific grinding processes. This in turn enables us to improve and optimize these processes.
Furthermore, we have also developed in-house the unique 3D-printed INNOZL™ titanium coolant nozzle. Since its introduction, this nozzle has brought about a worldwide revolution in the reduction and prevention of grinding burn by means of efficient coolant delivery to grinding processes.
For more information on INNOZL™, please visit **www.innozl.com**
The detection and subsequent prevention of grinding burn: this is the mission of Innogrind, and it has been our driving force since 2009. A force that has brought us to today's service offering for the analysis and optimization of grinding processes. Our success in this field is due in part to our cooperation with strong partners in the industry, such as Stresstech and Hirt-Line, and we also offer solutions based on Barkhausen analysis and X-ray diffraction. In addition, we also provide training for grinding operators.
Innogrind also offers a concrete solution for the prevention of grinding burn, with our self-developed INNOZL™ coolant nozzle. Combine the INNOZL™ with a Hirt-Line pipework system, and you have a complete and highly stable 50 bar coolant delivery system for burn-free grinding.

Services

Process analysis in grinding

When it comes to the analysis, detection and solution of grinding burn, there is no partner more competent than Innogrind BV.
Grinding is an industrial process that generates considerable heat. If this heat is not quickly removed by a suitable cooling process, it can have an adverse effect on the service life of the product. Grinding burn is a common cause of machine or engine component failure. Innogrind offers a total solution to this problem, from detection of the cause, through to specific measures aimed at prevention of thermal damage. For the assessment and optimization of your grinding processes, we offer Barkhausen Noise Analysis and X-ray Diffraction. Moreover, we can provide significant added value to the cooling of your grinding process with the Innogrind-developed INNOZL™ coolant nozzle.

Training

Innogrind provides practice-based grinding training on your premises. Giving simple tools to your staff to improve the ability to solve grinding burn problems.
Don't ask your employees to seek the limits; instead, give them the tools they need to go beyond the limits.

Stress technologies

X-Ray Diffraction (XRD) – Barkhausen Noise Analysis (BNA)
For questions or enquiries, please contact us by email or phone.

Jos van Langh

Meienvoort 18
5706 HK Helmond
T: +31 (0)49 256 59 50
M: +31 (0)6 57 33 63 72
E: info@innogrind.nl

www.innozl.com or
www.innogrind.nl

INNOGRIND B.V.
INNOVATIONS IN GRINDING

ADMATEC
Additive Manufactured Technical Ceramics

Proposition

Admatec is producing highly accurate parts (resolution as of 15 micrometer) in technical ceramics by 3D printing.
Based on in-house development ADMATAC has managed to gain control over recipes, additive manufacturing machines, debinding- and sintering procedures, and validation methods. This enables them to be the first to supply finished highly accurate additive manufactured ceramic parts on a commercial base.

The ADMAFLEX method now opens the way to apply all benefits of ceramics, combined with the design freedom of layered manufacturing techniques. (Internal channel's, integrated functionality, no moulds needed, design not limited to conventional production methods like milling and drilling).

- Factsheet (medio 2015, rapidly increasing)
- Standard resolution: 15 to 50 µm
- Building Z layer thickness: 15 to 50 µm
- Z building speed: 8 mm / hour, independent on complexity of geometry
- Max. part size: 130 x 70 x Z 400 mm
- Materials (expandable): Alumina oxide / Zircon oxide
- Density: >98%

The ADMAFLEX technology provides the designfreedom of additive manufacturing, and delivers complete dense microstructures with low surface roughness's. Material properties similar to ceramic products shaped by traditional technologies.

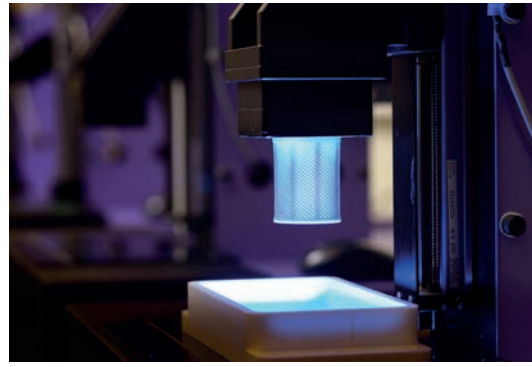
Capacity

Current capacity is setup for both jobbing as well as feasibility studies for high-tech components. Duplicating capacity, in 2016 an extra new separated line will be installed for medical productions due to a H2020 grant. Because all is inhouse developed, ADMATEC can upscale capacity in a matter of weeks by building more printers. Current setup (medio 2015) is:

Laboratory for making base pastes Sealed production area with:

- 4 ADMAFLEX production printers
- 1 ADMAFLEX prototype printer
- 1 Lithoz machine
- 3 Cleaning and finishing stations
- Two debinding and sintering streets (ovens)
- 1 QC, validation and packaging room

Challenge us with your 3D file or feasibility question!



Bart Kooijmans
Manager Operations

De Sonman 29
5066 GJ Moergestel
T: +31 (0)13 530 08 98
E: B.Kooijmans@admatec.nl

www.admatec.nl

ADMATEC
Additive Manufacturing Technologies

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 Geldermalsen
T: +31 (0)345 58 01 01
E: k.visser@ceratec.nl

www.ceratec.nl

ceratec®
TECHNICAL CERAMICS BV

Formatec Technical Ceramics BV

Formatec Ceramics specializes in the development and manufacturing of technical ceramic products and components. With technical ceramics it is possible to produce highly wear-resistant, temperature-resistant, biological- and chemical-resistant products. Products which are used in (high-tech) industry as well as in exclusive consumer goods.

For example, Formatec Ceramics produces ceramic products used in pumps for the chemical industry, where there is a high demand on wear-, temperature- and chemical resistance. We also make components for medical devices with very small dimensions, here technical ceramics can perform as either an electrical and thermal insulator, or as a conductive material.
We also make exclusive design products such as watches, telephones, pens and jewellery – all these use ceramic parts made by Formatec Ceramics.
Formatec Ceramics has already spent many years researching innovative applications of technical ceramics and constantly improves the Ceramic Injection Moulding process. With injection moulding, products can be made that would simply not have been possible using machining techniques. This is one of the unique characteristics of technical ceramics.

Formatec

- Can support the redesign of your product in close cooperation with you. We can develop the required moulds, jigs and fixtures.
- Is researching new materials, bonding systems, colours and processes.
- Uses existing geometries from which prototypes can be made by machining. Also available is additive manufacturing (3D printing) for which we use DLP technology. With this method we can produce one off or small series.
- Has a range of advanced high-precision machining tools. We can grind flat surfaces, as well as complex geometries with our 5-axis machine. Essential finishing processes are located in a cleanroom environment to ensure the highest of industry standards.
- Offers several surface finishes. From a high-gloss up to a frosted look. For laser engraving or surface decorations we work with a specialized laser company.
- Offers the service of assembly if the ceramic product requires assembly with other components.

Quality is assured at Formatec by our QC team. With the at most care our people conducting measurements with support of advanced measuring devices and/or visual inspection to ensure the required quality is delivered to the customer. Formatec respects the ISO 9001 protocols which supports our quality goals.

Harrie Sneijers
Sales Manager

Nobelstraat 16
5051 DV Goirle
T: +31 (0)13 530 80 93
F: +31 (0)13 530 80 90
M: +31 (0)6 30 77 97 76
E: h.sneijers@formatec.nl

www.formatec.nl

FORMATEC CERAMICS
Shaping technology and design

05
Mechanics miscellaneous

05 Mechanics miscellaneous	Company size	Speciality (USP)			Area							service		supply						
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
ACE ingenieurs & adviesbureau		Mechanical engineering service	0590;	R&D; systems; engineering			x					x	x	x		x	x	x		
Lencon	S	Mechanical engineering	0590;	opto-mechanical, FEM and simulation			x										x	x		
MI-Partners	S	Innovative and mechatronic solutions	0590;	simulation; vibration isolation/ optics/ modeling			x				embedded	x	x			x	x	x	x	
Settels Savenije van Amelsvoort	S	Supply and R&D of high end systems	0590;0207; 1305; 1214	engineering, simulation, modelling, mechafysics			x		x	x	x		x	x	x	x	x	x	x	x
Amstel Engineering BV	M	Mechanical engineering service	0590; 06	system suplier; 3d Design & Drafting			x	x	x					x	x		x	x	x	x
Janssen Precision Engineering	S	Precision mechatronics in vacuum/cryo	0590; 0690; 0601; 0602	Precision Eng.; FEM; simulation; production		x	x	x	x		embedded			x	x	x	x	x	x	
BKL Engineering		Mechanical engineering service	0590; 1102; 1104	handling tools; test rigs			x			x	x				x			x	x	x

ACE ingenieurs & adviesbureau

Passion for technology and innovation

ACE is ingenious. That means we work with inspiring, intelligent and passionate craftsmen. Every day our specialists combine their thorough knowledge with the ability to analyse from a different perspective.

Ingenious means analysing, developing, designing and realizing, with our customers' success as a starting point. It's the added value of individual competence, supported by a professional organization with vast expertise and experience. It also means believing and investing in a close collaboration in the chain and co-engineering with future constructing partners.

A completely transparent design process and an organization that connects to the needs and principles of our customers form the foundation of our company. That is why our services enable our customers to increase their competitive edge. Analysis and research, engineering at our premisses but also turn-key projects. We also provide individual specialists or if necessary complete engineering teams in addition to your own resources.

Our services are grouped in four market oriented business units:
- product development
- industrial automation
- hightech systems
- construction technology

The engineers within these units know the market. They are up-to-date as far as technological development is concerned and have a thorough and specific knowledge in their field.

The culture of ACE has its roots in a constant thirst for innovation. However, always pragmatic and without losing sight of important parameters as costs and planning. That force has been recognised already for 35 years. By industry leaders but also by starting innovators and research organizations.

The long lasting relations with our customers confirm our vision on collaboration, creativity, professionalism and effectiveness. Be ingenious!

Gijs Akkermans
Senior accountmanager

Dr. Holtroplaan 46
5652 XR Eindhoven
M: +31 (0)68 14 861 20
E: gijs.akkermans@ace.eu

www.ace.eu

Lencon

Lencon provides high end mechanical engineering. Core competencies are the development and optimization of complex products and systems.

Project based engineering

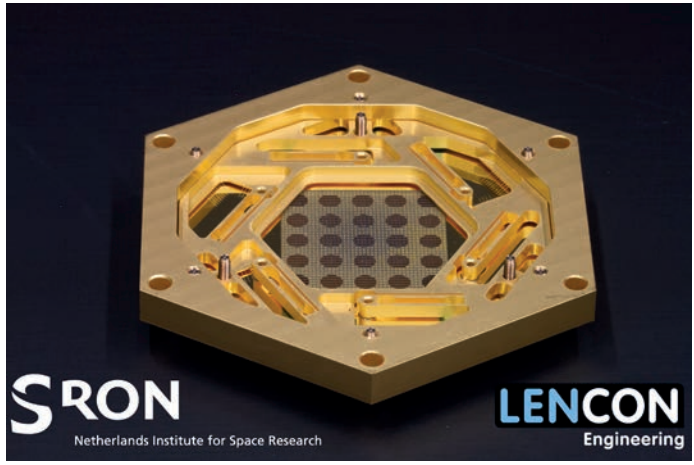
Lencon is an inspiring partner for engineering projects. Markets are Semiconductor industry, Defence, Space research and Medical.

- Engineering for smart cost reductions
- Reliability optimization
- Precision and optomechanical engineering

Add experienced engineers to your team

For many companies and scientific institutions Lencon is a flexible engineering supplier. Our engineers have acquired a wealth of experience by working on-site at a large variety of customers.

- Highly trained and experienced engineers
- Large support network of professional colleagues
- Added flexibility
- Outsourcing of FEM engineers



Marcel Jansen
Business Developer

Hondsdijk 3
HB 2396 Koudekerk aan den Rijn
T: +31 (0)71 341 65 55
E: m.jansen@lencon

www.lencon.nl

LENCON
Engineering

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.

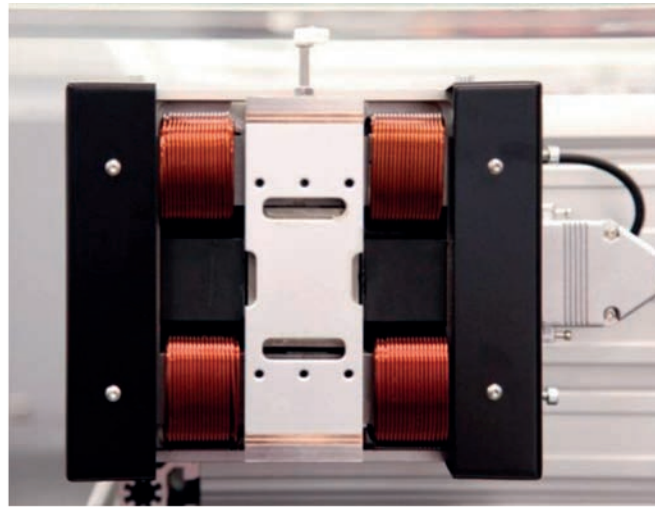
Our competences

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 (0)402 91 49 26
E: info@MI-Partners.nl

30 Employees

www.MI-Partners.nl

MI PARTNERS
PARTNERS IN MECHATRONIC INNOVATION

Settels Savenije van Amelsvoort

Settels Savenije is a group of companies where high-level technology is combined with a passion for people. We invent, design, manufacture, assemble and test high tech equipment, products and tools. We provide a challenging and dynamic working environment where theory and practice are combined in a splendid location @ TAQ – Strijp T Eindhoven.

Development & Engineering

Our research, development and engineering activities are covered by 5 expertise groups. Our groups cooperate closely and there are regular interchanges between projects. Our company is growing fast. If you are a talented technology professional, why don't you join the team that fits your personal interests and talents best?

Operations & Precision Parts

Our development activities are closely integrated with manufacturing, testing and assembly. Our supply chain team takes care of partnerships with strategic suppliers. Recently we installed a top of the bill cleanroom. As a solution provider, we guarantee success in delivering complex and technologically advanced systems.

Precision Parts

In our own precision parts factory, complicated high accuracy metal parts & modules are being manufactured. Production concentrates on cutting technology, from proto up to high-volume production. Automated machinery guarantees short lead times and cost-efficient production.

Sven Pekelder
CTO

Achtseweg Zuid 211
5651 GW Eindhoven
T: +31 (0)40 851 20 00
E: sven.pekelder@sttls.nl
E: grs@sttls.nl

www.sttls.nl

settels savenije van amelsvoort

TECHNOLOGY - INNOVATION - INSPIRATION

Amstel Engineering BV

In business for more than 25 years, Amstel Engineering offers advanced Mechanical Engineering services to customers that help them in developing complex mechanical designs and products. Our customers call on our expertise to design or evaluate critical components for reasons such as reducing cost, reducing time-to-market, increasing load capacity and extending life span.

End-to-end capability

Amstel Engineering's capabilities in providing solutions throughout the product development life cycle from conceptual design, industrial and mechanical engineering design, CAD modelling and detailing, to simulation, analysis and prototyping, product testing and manufacturing, makes Amstel Engineering a unique one-stop solutions provider for Engineering Services.
Clients outsource their engineering work to Amstel Engineering, allowing them to focus on their core competencies. We not only solve unique engineering challenges, we manage the routine day-to-day engineering tasks that many clients no longer can complete in house.

Dedicated staff

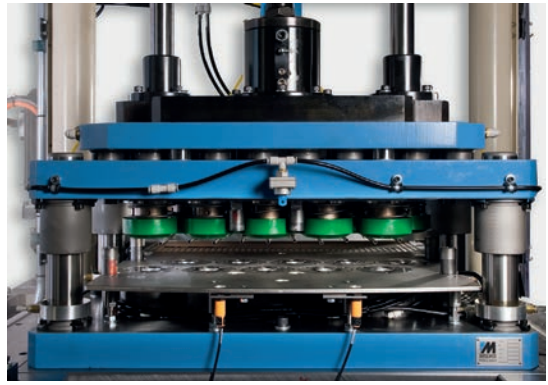
We are staffed by professional engineers and designers with extensive experience and expertise in engineering design and 3-D drafting in a range of industries. We focus on delivering technically accurate and scientifically sound solutions based on our training and industry knowledge.

Proven expertise

We have a proven track record of providing complete Mechanical Engineering solutions for customers in verticals like Aerospace, Automotive, Rail, Material Handling, Food Processing and Retail.
What does that mean for you? When you partner with Amstel Engineering, you can depend on better value, faster delivery, superior products and services and a collaborative relationship throughout your project – as well as an engaged, expert partner for the life of your business Amstel Engineering is part of the Neitraco Groep

References

ASML – Nikhef – ECN – Dutch Space – Philips – ASM – Vanderlande Industries – Stork/Fokker – Multin Hittech – SKF



André Scharis
Commercial Manager

Joan Muyskenweg 22
1096 CJ Amsterdam
T: +31 (0)206 68 06 06
E: a.scharis@amstel-engineering.nl

www.amstel-engineering.nl

Amstel ENGINEERING BV AMSTERDAM
Neitraco GROEP

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.

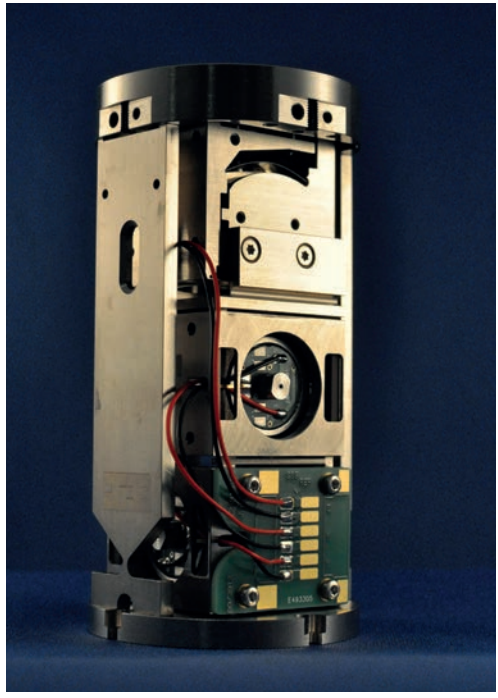
The company was founded by Huub Janssen in 1991 after several years of experience in the high-tech industry of companies like ASML and Philips. Nowadays, we have built up a team of professionals which are able to find and implement solutions for very challenging engineering requests. JPE has gained multidisciplinary 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 (0)433 58 57 77
E: huub.janssen@jpe.nl

20 employees

www.jpe.nl

EXPERTS IN POSITIONING

JANSSEN PRECISION ENGINEERING

BKL Engineering

About us
BKL Engineering enables its customers to bring their high-tech operations to the next level. For instance, in the case they want to introduce new products or services. To this end we develop specific solutions enabling our customer to work safer and more effectively.

Products
As a specialist in mechanics and mechatronics we focus on:
- Handling tooling (a.o. hoisting / lifting tools)
- Special machinery (a.o. test rigs)

Services
Our range of services include:
- Engineering
- Production
- Inspection & Service

Safety expert (CE)
We have extensive experience in applying the machine directive. On request of our customers we can be held CE responsible for the tools they use. Furthermore, we are internationally ISO/IEC 17020 accredited to perform safety related inspections on specific hoisting and lifting tools.

References
Amongst others: ASML – FEI and Philips

Sander Aarden
Technical Account Manager

Collse Heide 1
5674 VM Nuenen
T: +31 (0)40 295 14 86
E: sander.aarden@bkl.nl

www.bkl.nl

BKL
smart engineering works

06
Vacuum and cryo

06 Vacuum and cryo	Company size	Speciality (USP)			Area							service		supply					
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware									
De Roovers Vacuum & Precision BV		Vacuum & Precision	06; 05	Engineering;prototyping				x	x					x			x	x		
Mogema BV	M	Complex and large vacuum systems	06; 0504; 050404	precision machining; assembly; welding	x		x		x						x		x	x	x	x
Hositrad Vacuum Technology	S	Ultra high vacuum and cryogenics	0601; 0602	customised systems, standard equipmnt, repair				x	x						x			x	x	
Vacutech		Ultra high vacuum and cryogenic systems	0601; 0602	customised systems, engineering, manufac-turing				x	x						x			x	x	
Vacuüm Specials	S	Ultra high vacuum and cryogenic systems	0601; 0602	customised systems, engineering, manufac-turing				x	x						x			x	x	
Vernooy	M	Ultra high vacuum and cryogenic systems	0601; 0602	customised systems, engineering, manufac-turing	x	x			x									x	x	
BOA Nederland BV	M	Metal hoses, bellows	060101;	welded compensator assemblies				x	x										x	x
DH Industries BV	S	Cryogeneratos and circulators	0602; 06010806, 060201, 06020206	cryogenics and cooling				x						x			x	x	x	x
Cryoworld BV	S	Cryogenics	0602; 0601	design, prototyping, series, transferlines				x	x					x			x	x	x	x
DeMaCo Holland BV	M	Cryogenics and ultra high vacuum	0602; 0601	design, prototyping, series, transferlines	x			x	x						x		x	x	x	
Lamers High Tech Systems	M	Processing high purity gases & liquids	0602;09; 1006; 1309	engineering/ production/ on site installation / turnkey				x		x		x	x	x	x		x	x	x	

DeRoovers Vacuum & Precision Technology

For everyhing concerning vacuum and precision technology, from idea to realisation, DeRoovers can help you.

With our years of experience and a wide range of knowledge we will help you find the answers to your questions. We do this through close and strong partnerships with established partners, who all have their own specialty. We believe in combining strengths.

DeRoovers will help your company gains its goals. And that is a promise.

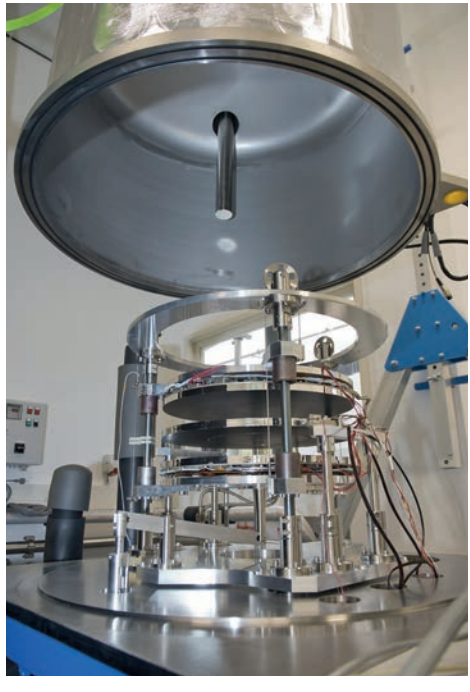
Our field of ...

expertise:

- Vacuum
- Precision Mechanics
- Cryogenic Technology
- Vacuum Pumps
- Lab- and Analysers Equipment
- Tooling
- Monitoring Systems / PLC
- Maintenance
- Components and Hardware
- Prototyping

experience:

- BioScience
- Energy & security
- Healthcare
- Micro electronica
- Offshore
- Optical Technology
- Aerospace
- Semiconductor Technology
- Solar Technology



Rob de Lang
Manager Sales

Cayennehof 18
2215 BH Voorhout
T: +31 (0)252 86 76 04
E: info@deroovers.nl

www.deroovers.nl

deroovers
VACUUM & PRECISION TECHNOLOGY

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.

Sebastiaan Vrensen
Sales Manager

Industrieweg 9
8084 GS ‘t Harde
T. +31 (0)525 65 15 33
E: info@mogema.nl

www.mogema.nl

mogema3.0

an Aalberts Industries company

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 (0)33 253 72 10
E: info@hositrad.nl

Turnover: 4 M€ | 10 employees

www.hositrad.nl

VACUUM TECHNOLOGY
Hositrad

Vacutech B.V.

For almost 30 years we have been manufacturing and assembling vacuum technology and precision engineering products at the highest level for various industries. For our clients and ourselves only absolute precision and the highest quality are good enough.

Creative precision solutions

Another characteristic of Vacutech is that we always focus on solutions. The word 'impossible' is not part of our vocabulary. With passion for our specialism as our basis, we see it as a challenge to come up with inventive solutions for complex assignments. Whether it relates to a single component or a complete composition or sub-composition.

Working together the way you prefer

Vacutech has everything it requires to carry out your assignment successfully. From design, purchasing, manufacture and assembly right up to functional testing: we can take care of the whole process for you. But you can also call us in for just one of these specific processes and, if necessary, we will bring in the expertise of third parties. It is up to you to decide how we work together.

Our professional skills make the difference!

We are a reliable and constructive partner for every client due to our know-how and commitment. For manufacture and assembly, we have access to experienced skilled staff and extensive production facilities.

Distinguishing features of Vacutech

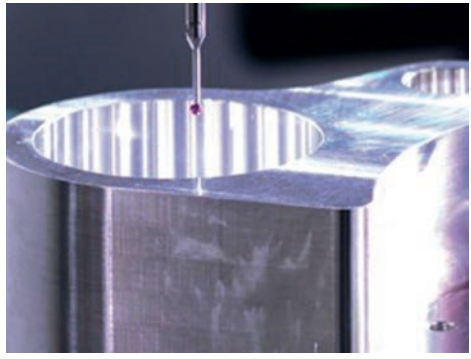
- Vacuum technology
- Cryogenic technology
- Manufacture
- Assembly
- Innovative approach
- Solution-oriented help
- Utmost precision
- High quality

Jeroen van Westing
Manager Sales

Polakweg 4A
2288 GE Rijswijk
T: +31 (0)70 399 03 90
E: info@vacutech.nl

www.vacutech.nl

VACUTECH
VACUUM EN PRECISIE TECHNOLOGIE



Vacuüm Specials

Vacuüm Specials B.V. is specialised in the implementation, construction, manufacturing of components and subsystems and the realisation of complex projects on a turnkey bases regarding Vacuum technology and Cryogenic Applications.

Vacuüm Specials prefers to work in a "Partnership" relation rather then in a strict Customer – Supplier relation.

Vacuüm Specials B.V. originated from the Vacuüm Specials branch of Leybold B.V. in The Netherlands and obtained independent status from 1 July 1997.

From its establishment in 1975, Vacuüm Specials has delivered – both in Holland and abroad and to the fullest satisfaction of its customers, a variety of projects, resulting in an expertise in the field of vacuum technology and cryogenics applications.

All company processes take place following fixed procedures in accordance with ISO 9001:2008. After having prepared a tender followed by the acceptance of a purchase order, project progress is set out in consultation with the customer in a project planning.
Hereafter engineering takes place, in close cooperation with the customer, using SolidEdge or AutoCAD. Exchange of drawing files and project communication takes place by means of E-mail.

After the drawings have been approved by the customer, production commences where quality monitoring is an ongoing process.

References

Nuclear Gas Industry (pump sets, leak testers, production machines, automatic LN2 fillings systems) – ESA/ESTEC and TNO (space simulation cambers, thermal vacuum systems and LN2 filling systems) – ASM (special spool pieces and traps) – Omicron (Liquid Helium Cryostats for low temperature scanning Probe Microscopes) – Oerlikon Leybold Vacuüm (Chambers and special products) – Mapper Lithography (chambers and special products) – Zeiss (special products) – Linde (LHe transfer lines) and DCA Finland (UHV Chambers up to 1000COF.

Jan Bos
Managing Director

Rosmolenlaan 3
3447 GL Woerden
T: + 31 (0)348 43 60 80
E: janbos@vacuumspecials.nl

Turnover 2.1M€ | 13 employees

www.vacuumspecials.nl

VACUÜM SPECIALS

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

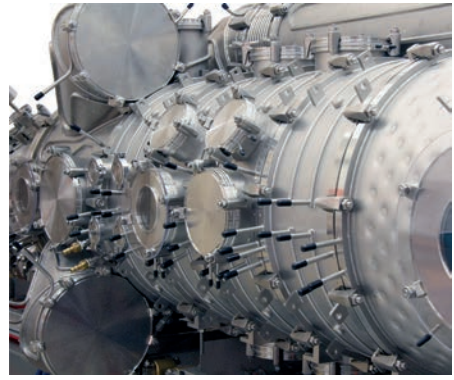
Vernooy realized and completed the delivery of most of the mechanical parts for Magnum-PSI for the FOM-institute DIFFER (the Netherlands). They are completely produced by Vernooy Vacuum Engineering.

Fred Verkerk
Managing director

Archimedesbaan 8
3439 ME Nieuwegein
T: +31 (0)306 03 12 93
E: verkerk@vernooybv.nl

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

www.vernooybv.nl



BOA Nederland / BOA Group

Introduction – Purified Solutions

BOA Nederland is a part of the worldwide operating BOA Group with 8 manufacturing plants. The BOA Group is specialised in the manufacturing of metal hoses, bellows, compensators and complete assemblies. BOA Nederland is specialised in industrial and ultra-clean / ultra-high-purity / ultra-high-vacuum products and assemblies.

Competences

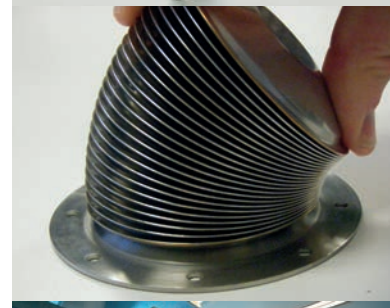
Design / Engineering	Engineering gas & liquids distribution in/around machine
Welding & Assembly	Of the hose/bellows to any connector, flange, hard ducting, etc. For series of 1 – 10,000 pcs.
Cleanrooms	For Cleaning, Assembly, Testing and Packaging
Leak Tests	With air, water, helium, nitrogen, XCDA
Cleanliness Tests	UV-inspection, Airborne Particle Count, Residual Gas Analysis, Total Organic Carbon

Products

Hoses	SS 316 L, SS 316 Ti, SS 321, Inconel, Hastelloy, PTFE, PUR, braiding, PTFE liner, etc.
Bellows	SS 316 L, SS 316 Ti, SS 321, Inconel, Hastelloy, Elastomer, etc.
Assemblies	With connectors, flanges, valves, hard ducting
Tests	Leak Tests and Cleanliness Tests

Markets

- Semiconductors
- Optical
- Vacuum technology
- Solar (thin film, ALD)
- Space & Aerospace
- Food, Bio & Pharma
- Health Care (MRI scans/magnets, cryogenics)



Erik Verhoef

Maidstone 56
5026 SK Tilburg
T: +31 (0)13 535 06 25
M: +31 (0)6 51 72 34 29
E: Erik.Verhoef@boanederland.nl

BOA Group : > € 200 mln. /
approx. 1,100 employees

www.boagroup.com

BOA Group

DH Industries

DH Industries specializes in the design and production of cryogenic cooling systems using its two products brands, Stirling Cryogenics and CryoZone.

Stirling Cryogenics produces Stirling Cryogenerators in different versions, producing cooling power from 15 to 150 K, from 25 W to 8 kW.

Stirling Cryogenerators are the base of all DH Industries systems to produce LN2, LO2 or LAir on-site. They are also the core of our closed loop cooling systems, either around 20K using He gas as thermal fluid, or (sub-cooled) LN2 at temperature from 67 up to 100 K.

CryoZone offers an extensive choice of cryogenic gas circulation fans called CryoFans, cryogenic pumps and heat exchangers for third-party cryocoolers. 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.

Combining these different components, we can design and produce a large variation of system concepts, adapted to the needs of a particular application.

Examples of cryogenic cooling systems based on the use of Stirling Cryogenerators and CryoFans are the liquid argon cooling system for Icarus, INFN Italy; cooling of neutron moderators at IFE Kjeller Norway, ISIS Chilton Didcot UK and Oyster in The Netherlands; several HTS cooling systems at 20 or 67K in USA, Europe, Russia, China, Korea and Japan, as well as 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

www.dh-industries.com
www.stirlingcryogenics.com
www.cryozone-dhi.nl

Cryoworld BV

Advancing in Cryogenics

Cryoworld B.V. is a manufacturer of cryogenic, vacuum insulated equipment. Our company is based on extensive experience in both theoretical as well as practical field. Our core business is design, production, testing and installation of helium and other custom designed cryogenic equipment.

In our new production facility our dedicated engineers and specialists make sure every project meets the highest quality standards. Cryoworld delivers projects to renowned companies and scientific institutes worldwide.

Besides the design and fabrication of "standard" cryogenics our fields of expertise are:

- Valve boxes for liquid helium
- Liquid helium transfer lines
- Cryogenic pressure vessels
- Special cryostats
- Special cryogenic processes and equipment
- Innovative design, cryogenic prototyping
- Accurate sensing and controlling of cryogenic processes, level, pressure and temperature
- Custom built valves

Some references:
Cern – Linde Kryotechnik AG – Air Liquide ALAT – GSI Darmstadt – Helmholz Zentrum Berlin – Triumf – Radboud University (HFML lab) – Merck – MBB Fertigungstechnik – CCM

Marcel Keezer
CEO

Havenweg 11C
1771 RW Wieringerwerf
T: +31(0)22 87 43 930
E: m.keezer@cryoworld.com

www.cryoworld.com

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.

Demaco is the leading knowledge driven cryogenic infrastructure partner for industrial gas companies, scientific institutes and EPC contractors world-wide. Our team of cryogenic specialists, Cryogeniuses, is committed in supporting our partners in their daily effort to transport and condition all liquefied gasses. By advising on, designing, engineering, manufacturing, testing and installing customer specific vacuum insulated solutions of superior quality we continuously provide the highest yielding infrastructure in the industry.

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 Strategy & Large Projects

Oester 2
1723 HW Noord-Scharwoude
T: +31 (0)226 33 21 21
E: rd@demaco.nl

100 employees

www.demaco.nl

DEMACO

Lamers High Tech Systems

Lamers High Tech Systems is a leading supplier in the semiconductor, PV solar, aerospace, pharmaceutical, and other technology driven markets for over 25 years.
It is our mission to bring ultra-high purity fluid handling, conditioning, and delivery solutions to our customers that minimize the total cost of ownership while maintaining the highest levels of quality and reliability.

Lamers High Tech Systems B.V. is headquartered in Nijmegen, The Netherlands and has an additional production site in Kerkrade. Both facilities have certified orbital stainless steel welding, plastic welding, and assembly in cleanrooms up to class 10 for high purity manufacturing.

In addition, Lamers High Tech Systems provides R&D, design engineering, and the global installation and commissioning services to ensure our customers sytems startup in the most efficient and productive manner.

The installation teams have the capabilities to do turnkey installation of complete infrastructures. These services include: Gases, Chemical and Power supply systems, Cooling, Demi Or process water systems, gas exhaust and scrubbing systems, drainage and waste water treatment systems.
These installations and piping systems are qualified and validated after installations are tested by our in house team that have dedicated equipment depending on the customer's specifications. The teams have done a number of installations wordwide incl "hot" commissioning at the point of use.

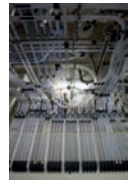
Complex piping set up

IBC Chemical Cabinets

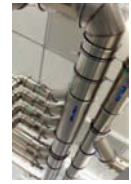
Chemical distribution

DI Water system

Gas bottle and distribution Cabinets



Toxic Piping



Exhaust Piping

Waste water treatment

Jason van Kuijk

De Vlotkampweg 38
6545 AG Nijmegen
T: +31 (0)24 371 67 77
F: +31 (0)24 377 76 95
E: info@lamersHTS.com

www.lamersHTS.com

Lamers High Tech Systems

AALBERTS INDUSTRIES

07–13
Miscellaneous

07 - 13 Miscaleanious	Company size	Speciality (USP)			Area															
		Discipline (WHAT)		technology-/ skill-/ product centric (HOW)	Metal							service		supply						
			procurement codes		Large	Small	Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware	Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
Delft Neutron Instruments BV	S	neutron instruments	07;	components for polarized neutrons													x	x		x
Amsterdam Scientific Instruments	S	Particle and photon detectors	070103; 0301	Hybid pixel detectors						x	x						x	x	x	
Single Quantum	S	single infra red photon detector systems	0704;	superconducting nano-wire single photon detectors				x		x	x		x	x	x	x	x	x	x	x
Nedinsco	M	photonic system design and production	08; 05; 03	optics; mechanics; electronics; sensors			x							x	x			x	x	
Cosine		measurement	08; 07; 03	cameras, optics,s ensors, X-ray						sensor networks	x						x			x
Sumipro	S	high precision optic systems&components	0801;	design & consultancy; precision machining; coating										x			x	x	x	
Diamond Kimberlit B.V.	M	Optical fiber Technology	08040403; 080201	fiber-optics interconnecting parts		x	x	x	Feed-trough								x	x	x	x
Montair Proces Technology BV	M	nuclear proces technology; pollution	09; 10	turnkey systems supply; projects								x			x		x	x	x	
New Cosmos -BIE	M	gas detector systems; safety; alarming	09; 10	gas detection; dedicated sensors; site service										x	x			x	x	
Smink Group BV	S	installations and systems for high purity	09; 10	engineering; manufacturing; oribital welding										x	x		x	x	x	
Harveld Apparatenbouw BV	S	process equipment supplier	0901/02; 060204; 1302	piping, vessels, construction	x	x									x			x	x	
Hydro-Carbon Separation Systems BV		separation/filtering of hydro-carbons	0902; 09031003; 1003	customised separation/ filtering systems										x				x	x	

07 - 13 Miscaleanious	Company size	Speciality (USP)			Area								service	supply							
		Discipline (WHAT)	procurement codes	technology-/ skill-/ product centric (HOW)	Metal		Mechatr.	Cryo	Vacuum	Elect-ronics HW	Soft-ware	Project management	Systems Engineering	Technical consultancy	system supplier	R&D	Development	Engineering	Production/assembly	Test&Measurement
					Large	Small														
NRG	L	general nuclear service supplier	1001; 0904; 13090104	nuclear, process and medical services										x			x	x		x
Ecomatters		chemical safety;sustainability	1090;	consultancy, service, training										x						
IPS Technology	S	packaging, handling and transport	11; 1102; 1104	integrated handling and transport solutions	x	x	x	x	x			x	x				x	x		x
PTB Special Equipment		customized materials handling equipmnt	1103; 1104; 1110	engineering & manufacturing											x			x		x
Heemskerk Innovative Technology	s	remote handling and robots	1104; 110308; 0207; 1001	simulation; systems engineering; consultancy			x			x	x		x	x				x		
Tree C	S	virtual reality for robots; remote handling	1104; 110308; 0207; 1001	virtual reality; 3D simulation;							Simulation			x						
elQuip		Technical room furniture	1120105; 120106																	
Atkins BV	L	technical services	13;	design and analysis; areospace; consulting								x	x	x		x	x	x		
Thomas Thor Associates	S	staf & interim concultants for nuclear	13; 1312	recrutement & excecutive search								x	x							
ATG Europe		on site technical services	1305; 1307	projects/ simulation/ ananalysis/ FEM						x	x	x	x	x		x	x	x		
Inno4life		life sience; engineering; packaging		tailor made; automation; system integration										x				x	x	
High Tech Institute			121402; 121403; 121404; 121405																	

Delft Neutron Instruments BV

The long experience of Delft University of Technology in the development of instrumentation for neutron science now serves the global neutron scattering community through a spin-off company. Delft Neutron Instruments designs and delivers a wide variety of high-tech components for polarized neutron applications tailored according to your specifications:

- High-frequency magnetic flippers and our in-house developed HF-generators
- Foil-based flippers (like in SESANS at the TU Delft)
- Coils for adiabatic spin rotation
- General purpose custom build DC coils and guide field configurations
- Complete add-ons for polarized neutron and Larmor labelling applications (like on OFFSPEC at ISIS in the UK)
- Our product range will be expanded in the future, please contact us if you need any other components or instruments.

Delft Neutron Instruments BV delivers the full package: not only a component but also design, specify, install, and supply test reports and simulations.

Chris P. Duif, MSc.
CEO

Mekelweg 15
2629 JB Delft
T: +31(0)152 78 42 67
E: c.p.duif@tudelft.nl

www.delftneutroninstruments.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. Hans Roeland Poolman
CEO

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

10 employees

www.amscins.com

AMSTERDAM SCIENTIFIC INSTRUMENTS

Single Quantum

Single Quantum provides single photon detector systems for the most demanding scientific and industrial applications in the near and mid infrared. We offer reliable and easy to use complete detection systems, based on superconducting nanowire single photon detectors (SNSPD).

About us

Early 2012, Single Quantum was established as a spinoff from the Delft Technological University and scientific research funded by FOM and NWO. For wavelengths in the near and mid infrared, Single Quantum offers the best single photon detectors in terms of detection efficiency, noise levels, time resolution and reliability. We are the first company offering a complete SNSPD system with a built-in cryogenic cooler, which has the advantage of not requiring any external liquid helium supply.

Product specifications

Timing jitter: 50 ps – Dead time: <10ns – Spectral response range: 0.2-2 µm – No afterpulsing, no gating necessary

Quantum efficiency

Wavelength (nm)	Dark count rate (/s)	Quantum Efficiency (%)
800	<100	18
1310	<100	28
1550	<100	10

Applications

- Single quantum dot spectroscopy
- Photon correlation measurements
- CMOS defect analysis
- Optical quantum computing
- LIDAR
- Free space communication
- Time-resolved fluorescence measurements
- Quantum key distribution
- Optical coherence tomography

References

Heriot-Watt University – Hokkaido University – Stockholm University – Bristol University

Dr. S.N. (Sander) Dorenbos
CEO

Lausbergstraat 17
2628 LA, Delft (mail address only)
T: +31 (0)628 13 35 34
E: sander@singlequantum.com
6 employees

www.singlequantum.com

SINGLE QUANTUM

Nedinsco

Nedinsco develops, designs and produces a broad range of photonic technology based systems for high-tech applications.

Nedinsco has many years of experience providing customers sophisticated systems consisting a combination of optical, mechanical and electrical technologies. Strategic partnership is a key concept in Nedinsco's approach to contemporary as well as future business.

Capabilities
With our extensive engineering and production knowledge and our state-of-the-art facilities we are providing customers with state-of-the-art and cost effective photonic based systems enabling them to become more successful.

Goal is to deliver qualified serial products and being able to manage the complete lifecycle of the product starting with a basic idea of the customer until the service and aftersales.

Products
Camera systems, spectrometers, photonic sensors, alignment telescopes, sensor platforms, bore sighting and training systems.

Markets
Diagnostics (medical, pharmaceutical, forensic, recycling and food branches), semiconductor and defence.

References
ASML – TNO – Carl Zeiss – Saab Defence and Security – FLIR

Bob in den Bosch
Manager Marketing & Sales

Jan van Riebeeckweg 5
5928 LG Venlo
T: +31 (0)77 355 87 77
E: sales@nedinsco.com

www.nedinsco.com

NEDINSCO VENLO

Cosine Measurement Systems

About cosine
Cosine develops and builds optical and distributed measurement systems for its customers.

Cosine has extensive experience in
- multi-sensor hyperspectral, infrared and 3D imaging measurement systems
- X-ray optics
- distributed sensor networks

The systems of cosine are used in space, on aircraft, on drones, in the field and in the factory. The cosine team develops transparently in close collaboration with the customer.

Applications
Space & Aerospace: Miniaturized instruments for remote sensing, precision agriculture, water and air quality
Agri, Food & Pharma: Inline non-destructive quality and safety inspection
Safety & Security: Detection of features not visible to the human eye

Our customers
Cosine customers range from small high-tech companies to large industries and organizations.

Solutions ready to adopt
- CONDI® Continuous optical non-destructive inspection systems for inline inspection
- SPO® High-energy optics for space, beam lines and material analysis
- 3D-One® camera systems for multi-camera hyperspectral imaging in the visible and infrared
- a complete product line of miniaturized remote sensing systems for space and aerospace

For more information about our products and services visit our website cosine.nl

Prof. dr. Marco Beijersbergen
Managing director

J.H. Oortweg 19
2333 CH Leiden
T: +31 (0)71 528 49 62
E: m.beijersbergen@cosine.nl

www.cosine.nl

cosine | measurement systems

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.

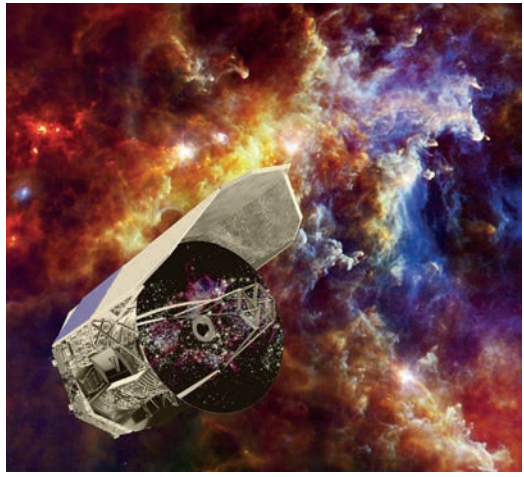
Form accuracies in general reach PV-values smaller than 350 nm with irregularity beneath 1 fringe (633 nm), depending on material and size.
Coatings: gold, silver, alumimium enhanced or protective (non oxidizing) coatings.
Infra red optics: Sumipro specializes in aspherical and diffrax surfaces for lenses, 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 (0)546 81 51 41
E: info@sumipro.nl
Turnover: 1.5 M€ | 9 employees

www.sumipro.nl

SUMIPRO bv
Submicron lathing



DIAMOND Kimberlit B.V.

The company
DIAMOND is a worldwide leader in supplying high precision fiber optic solutions and has been serving successfully several markets for over 30 years. Also, Diamond is known as a dynamic and innovative company, able to develop reliable, customized components and equipment, in response to the increasingly demanding customer requirements.

Technologies
Diamond provides a wide range of products based on sophisticated technology and its strong know-how acquired over many years. Manufacturing special fiber-optic interconnecting parts is our core business, a specialization that allows us to meet the most different kinds of customer's needs.

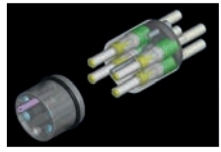
Manufacturing depth
Diamond has a well-established competence in processing high-quality ceramic, metal and plastic components, right from the raw material to the finished product. This system allows the various manufacturing processes to be controlled and enables us to guarantee that each single component meets all the quality, reliability and performance standards which stand for Diamond products throughout the world.

Mechanical competences
- Integrated Ceramic production (pressing, sintering, machining); Precision metal machining in non-standard metals (TI,WC, Kovar, stainless ,…); High precision plastic injection; Ultra-high precision lapping; Ultra-high precision drilling; Fiber-ferrule polishing.

Optical competences
- Fiber active core alignment;Active Polarization Orientation; Contact optical interfaces; Non-Contact optical interfaces; High power optical applications; 3D linear (X,Y,Z) active fiber positioning; Multi-Channel concepts.

Assembly competances
- Singlemode Fiber; Multimode Fiber; Standard PM Fiber; Enhanced PM Fiber; Reduced Clad Fiber; Double Clad Fiber; Large core Fiber; Small core Fiber; Multicore Fiber; Photonic Crystal Fiber.

References
Nikhef – CERN – TNO – ESA – NASA – ECN – Mapper – Philips – ASML – Thales – Dutch Defense – NATO – Fugro – Fokker Elmo – TU Eindhoven – TU Delft – UTwente – Leiden University – VU Amsterdam and many more.



Ivar Koren
Technical Product Manager

Transistorstraat 101
1322 CL ALmere
T: +31 (0)36 35 87 35
E: i.koren@diamond-kimberlit.nl

www.diamond-fo.com

DIAMOND
the fiber meeting

Montair Process Technology B.V.

Montair Process Technology B.V., established in 1971, provides customised turnkey solutions on a worldwide basis. Montair Process Technology B.V. is an independent member of the Manders Industries Group with affiliated companies established in the Netherlands, Belgium, Romania, India and the USA.

Product information

The core business of Montair Process Technology B.V. is divided into two categories:

- Air pollution control & thermal treatment systems
- Special process equipment.

Turnkey projects

Montair Process Technology B.V. focuses its activities mainly on realisation of turnkey projects. From the design and engineering phase to the final start-up of the systems, Montair Process Technology B.V. will carefully manage all aspects of a project. All stages of a project are realised under our own administration in our brand new plant.

The manufacturing department of Montair Process Technology has a well-equipped machinery. This department mainly processes stainless steel, high-nickel alloys, aluminium and thermoplastics. The engineering and manufacturing department is also responsible for the development and assembly of complete control systems including HMI and data logging capabilities.

Montair Process Technology B.V. is certified according ISO 9001, SCC** and ISO 3834-2 (under construction).

René Francken
Managing Director

Heuvelsestraat 14
5976 NG Kronenberg
T: +31 (0)77 467 2473
E: info@montair.nl

50 employees

www.montair.nl

MONTAIR PROCESS TECHNOLOGY
member of mandersgroup

New Cosmos – BIE

New Cosmos – BIE is a supplier of stationary and portable gas detection equipment, mixing high qualified gas detectors with smart forms of communications suitable for applications in gas and oil as well as any other type of industry.

Started in Europe over 25 years ago with a range of detectors for the Semiconductor Industry, New Cosmos – BIE is effectively since early 2011 a part of the global New Cosmos organization.
Together with our 60 years old parent company, New Cosmos based in Japan, New Cosmos – BIE serves beside Europe also customers in the Middle East and North Africa.
Our mission is to create a safer global environment with a reduced number of accidents.
Whilst continuing the developments of products and combining the excellent technology from both sides we aim to create a safer world with a reduced number of accidents in the industry and living environment.

Our strengths:
- Sensor technology in house
- Over 50 years of experience
- Reliability
- Unique Selectivity
- Long life time
- Extended range of sensors for different gasses

Solutions for the following markets:
- New Energy Markets
- Gas & Oil Exploration
- Chemical & Petrochemical
- Automotive Industry
- Laboratories
- Micro Electronics
- PV Industry

Product range:
- Fixed gas detectors (diffusion/suction)
- Portable gas detectors
- Alarm systems
- Software supervision systems
- Grease /oil dust meter
- Odor level indicators
- Residential detectors

Services:
- Maintenance
- Upkeep
- Repair
- Training
- Survey

References

Within the Netherlands: University Twente – University Delft – TNO – University Eindhoven – Smitovens – NXP – Shell – Philips – Fanuc – Yaskawa – Dow – DSM – Glaesum – ECN. *Outside the Netherlands:* ST Crolles – X-fab – Analog Devices – Helmholz – Fraunhofer – University Sheffield – University Swansea – Toyota – Kawasaki – Zarlink – University Lund – Airliquide – Praxair – L-foundry – University Madrid

Mrs. Martine Zegers
Sales & Marketing Manager

Maxwellstraat 7
1704 SG Heerhugowaard
T: +31 (0)725 76 56 30
F: +31 (0)725 72 18 18
E: sales@newcosmos-europe.com

www.newcosmos-europe.com

NEW COSMOS - BIE

Smink Group BV

We (co-) develop, produce, supply and install components, sub-systems and complete installations in the high-purity industry.

Smink Group follows strict quality protocols accurately and supplies its products and services in accordance with the relevant standards including GMP and FDA.

This, combined with the company's flexible no-nonsense approach and high sense of quality,results in end products that are guaranteed to meet your specific requirements.

When you are a manufacturer, engineer, engineering agency or contractor and you have to take care of the construction or modification of a high-purity installation, why not challenge Smink?

Just tell us what you want.

Experience our problem-solving capacity, our personal commitment, and our straightforward solution-oriented approach!

Rene Smink
Director

De Amert 441
5462 GH Veghel
T:+31(0)413 36 24 09
F:+31(0)413 36 92 79
E: daphne@smink-group.com

www.smink-group.com

Smink GROUP
HIGH PURITY IS OUR PASSION

Harsveld Apparatenbouw B.V.

Engineering, manufacture and installation of:
- Piping
- Plate- and construction work
- Pressure vessels & tanks
- Heat exchangers
- Skidbuilding

Materials
- All Steel and Hi alloy Steels
- All Stainless Steels and heat-resistant Steels
- Duplex and Super Duplex
- Aluminium
- Titanium, Hasteloy®, Incoloy®, Inconel®, Monel®, Haynes®

Certified
- ISO 9001
- ISO 3834-2
- PED Module H and H1.
- Workshop Approval Germanischer Lloyd

"We have built the Smelt Reduction Vessel for the HIsarna pilot plant"

References
Albemarle – Danieli-Corus – EXXON mobil – Gardner Denver Nash – Linde Gas – Tata steel – e.a.

Rob de Visser
Managing Director

Leeghwaterweg 3
1951 NA Velsen-Noord
T: +31 (0)251 22 90 71
M: +31 (0)6 22 52 46 76
E: rob.devisser@harsveld.com
E: info@harsveld.com

50 employees

www.harsveld.com

Hydro-Carbon Separation Systems B.V.

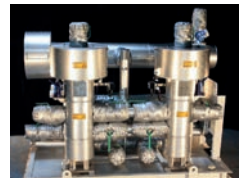
Hydro-Carbon Separation Systems B.V. is an engineering and sales organization focussing on filtration and separation solutions in the range of hydrocarbon based products, applications and markets all over the world.
We specialize in the filtration and separation of process streams, such as fuels, (natural) gas, oils, base chemicals and water.
We provide engineering, design and supply of customized filtration and separation solutions, based upon years of relevant experience.
We offer a range of products including – but is not limited to – cartridge filters, coalescers, filter/water separators, cyclones, settlers, monitors, degassers (OILML-R117-1 approved), and separators for hydrocarbon liquids and gasses.

New pressure vessels can be designed according to customer's requirements, specifications and international pressure vessel codes including ASME U-stamp and NoBo inspections.
Existing vessels can be retrofitted with high quality filter-, coalescer- or monitor replacement cartridges for improved performance or better economics.

With this specific knowledge we are in the position to offer custom made:
- Filters to remove solids from refined hydrocarbons as diesel, naphtha, gasoil, kerosene, gasoline, transformer oils etc.
- Filter/water separators for removal of water from hydrocarbon liquids and gasses
- Oil separators to remove hydrocarbons (oil) from water.
- Degassers (OIML R117-1) to remove gas from liquids in custody transfer metering systems.
- Tankdewatering systems.
- Unloading systems

We served already several international known companies like BP, Shell, Siemens, Dow Chemical, IMTECH, KROHNE Oil&Gas, URUK Engineering etc , with our filter and separator vessels and internals.
We welcome your technical questions or challenges in the field of filtration and separation.



Andy Hein

Keteldiep 14
8321 MH Urk
The Netherlands
T: + 31 (0)527 69 08 11
E: ah@hydro-carbon.nl

www.hydro-carbon.nl

HC HYDRO-CARBON
Separation Systems

NRG

NRG is a high-end service provider. Based in the Netherlands, we provide products and services to nuclear industries, process industries and medical industries around the globe. For more than 50 years we operate the High Flux Reactor along with Hot Cell Laboratories, Decontamination and Waste Treatment facilities and other advanced nuclear infrastructures. We have an established, licensed site track record combining in-depth knowledge on radioactive material with broad operational experience.

We employ 500 world-class scientists, engineers, technologists, operational staff and highly qualified consultants in a wide range of nuclear technology, radiation protection and radioactive waste disciplines. Together we support the nuclear lifecycle from new build and operations to decommissioning and waste management.

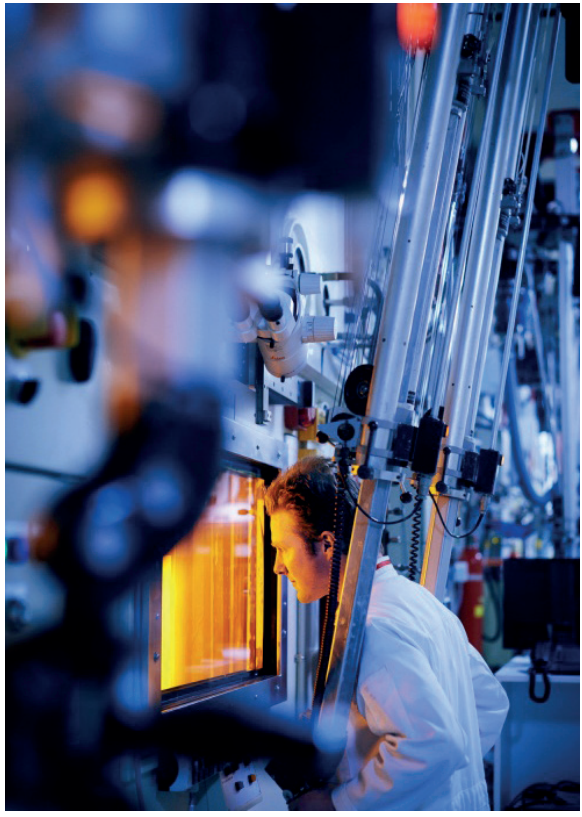
Our extensive nuclear infrastructure allows us to offer a wide range of irradiation and post-irradiation services that cover all irradiation needs for industry.

As an independent organization, NRG offers support with confidential processes from product development to material qualification. We provide understanding of material behavior under neutron irradiation through standardized material test programs.

Lida Magielsen Msc.
Project manager Fusion Irradiation Solutions

P.O. Box 25
1755 ZG Petten
T: +31 (0)224 56 46 95
M: +31 (0)6 102 314 75
E: magielsen@nrg.eu

www.nrg.eu



Ecomatters

Ecomatters provides services, tools and training in the field of sustainability and chemical safety and links these topics where possible. Among our multinational clients are chemical and pharmaceutical companies, manufacturers of cosmetics and cleaning products, companies that provide water and environmental services and retailers. Within each project we are committed to achieve tangible results that are comprehensible and useful within the organization. We focus on customer satisfaction in order to build sustainable business relationships.

Sustainability

We offer sustainability strategy consultancy services as well as sustainability assessments based on Life Cycle Thinking, such as environmental footprinting, Life Cycle Assessment (LCA) and Life Cycle Inventory (LCI) data management. We assist organizations in determining their stance on sustainability and setting concrete sustainability goals. Further, we perform quantitative analyses in the area of social, financial and environmental issues and identify any issues within these sustainability aspects for our clients.

Based on Eco Efficiency Analysis (EEA), Ecomatters has developed the Customer Value Calculator (CVC). The CVC is a user-friendly, interactive model, which quantifies the business case of your sustainable product throughout the value chain. Fully customized to customer-specific products and/or scenarios, the CVC provides an integrated overview of financial and environmental impacts of your product.

Chemical safety

In the field of legislation and regulations, Ecomatters provides advice and guidance on chemical safety, substance management, REACH, EU-GHS/CLP, and product registrations. Depending on our customer's needs we take the full project off their hands or part thereof, such as performing (eco) toxicological risk assessments, authoring MSDSs, creating exposure scenarios or calculating hazard classifications.

Max Sonnen
Partner

Museumlaan 2
3581 HK Utrecht
T: +31 (0)6 44 83 63 84
E: info@ecomatters.nl

www.ecomatters.nl

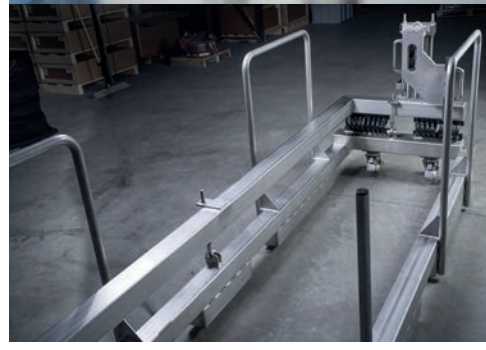
ecomatters

IPS Technology

IPS Technology is a renowned and independent advice and design bureau in High Tech packaging, tooling and testing.

IPS Technology develops a packaging transport method for industrial products that provides optimum protection. We advise on disassembly, shipping and reassembly of products and product components and have invested substantially in highly advanced test facilities. We test packaged and unpackaged products and conduct climate tests, corrosion tests, thermal shock tests, vibration tests and impact tests.

Innovar Cleaning Control, the sister company of IPS Technology, is a specialist company that is capable of providing the entire process of cleaning, qualification, assembly and transport.



Frank van Stiphout
Marketing & Sales Manager

Boschdijk 760
5624 CL Eindhoven
T: +31 (0)40 264 72 00
E: frank.van.stiphout@ips-technology.com

www.ips-technology.com

IPS Technology
Packaging Tooling Testing

PTB Special Equipment

Custom built material handling equipment

PTB Special Equipment is a manufacturer of non-standard mobile material handling equipment. Pallet trucks, pallet stackers and industrial tow tractors up to 50 tons lifting capacity.

References

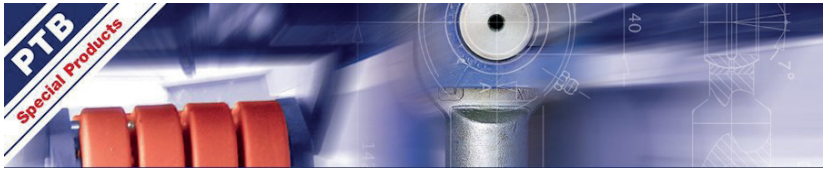
The company has built special machines for many well-known business partners, including ASML – Mercedes Benz – Philips – NedTrain – APM Terminals – Hitachi and many others.

PTB Special Equipment brings non-existing solutions to reality.

Jelle Zuidersma
Director

Osloweg 122
9723 BX Groningen
T: +31 (0)50 542 28 44
info@ptbspecial.com

www.ptbspecial.com / www.ptbmachinefabriek.nl



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

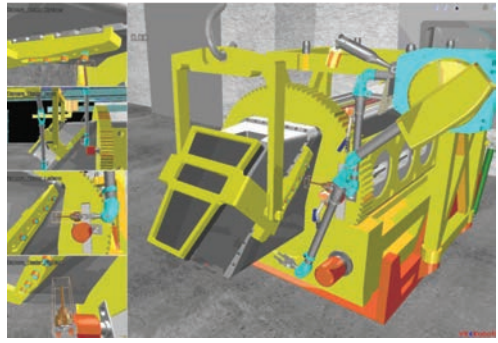
Innovation Management: Heemskerk Innovative Technology (HIT) blends innovation management, systems engineering, and people management to support research projects and to develop spin-offs into proof of concept and market readiness, working in close cooperation with Institutes, Universities, and industrial partners.

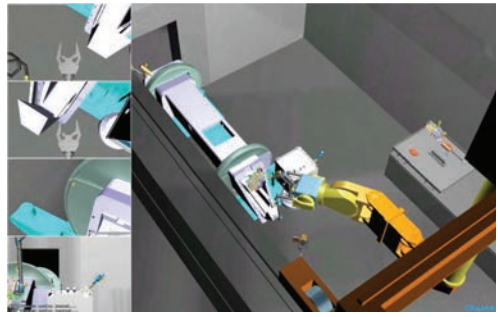
ITER Remote Handling studies: During operation, plasma facing components of the experimental fusion reactor ITER will get activated and contaminated with radioactive and toxic materials. Remote Handling (RH) maintenance is performed by master-slave telemanipulation techniques. Heemskerk Innovative Technology 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 (0)651 34 09 66
E: c.heemskerk@heemskerk-innovative.nl

Turnover: 400.000 € | 7 employees

www.heemskerk-innovative.nl

Tree C

Tree C Technology B.V. develops 3D simulation technology and builds advanced simulators for training, procedure design- and validation, remote handling and research. We serve a wide range of international clients in the maritime, offshore construction, oil & gas, heavy lifting, dredging, nuclear and related industries as well as a large number of universities.

Product information

The success of R E M O T E H A N D L I N G will be a key factor in the safe exploitation of fusion energy. VR4Robots® offers the best combination of interactive visualization and remote handling technology to prepare and execute the demanding RH-tasks in ITER.

VR4Robots® enables you to define, visualize, animate, simulate and interact with robots and manipulators in a virtual world. The environment may include digital mockup's based on 3D CAD data. Complex 'behaviours' of robots, cameras, animations, movement constraints and collision properties can be added to the environment to improve realism. VR4Robots® is capable of handling the largest full scale mock-up facilities with the aim to prepare, demonstrate and execute remote maintenance, and to develop the remote maintenance operating procedures to facilitate development of components.

References

- DIFFER (Dutch Institute For Fundamental Energy Research), NL
- JET (Joint European Torus), UK
- Oxford Technologies, Ltd., UK
- (image Remote Handling Control Room, courtesy of Oxford Technologies, Ltd.)

Gerard Weder
Managing director

Da Vincilaan 31
6716 WC Ede (Gld.)
T: +31 (0)318 64 87 10
E: info@tree-c.nl

www.tree-c.nl

TREE C TECHNOLOGY

VR4Robots

elQuip

elQuip has been for over 30 years overall designer of workshops in the field of electrical and electronic engineering and assembly. Advice and guidance form the basis for each project, customized solution or delivery of finished products.

Product information

The range (ESD-safe) workshop furniture consists of a variety of workbenches and workbench configurations, work chairs, filing cabinets and trolleys. Additionally elQuip offers a wide range of tools, (ESD) accessories and instruments (including oscilloscopes, spectrum analyzers, generators, power supplies and multimeters of the brand BK Precision).

FLEXILINE®

The workshop furniture brand Flexiline® has been developed by elQuip on the basis of customer requirements. Much attention has been put into ergonomic aspects, flexible applicability and extensibility. As a basis a worktable is used, which can be extended with measuring uprisings, electrification (230/400V), instrument-consoles (for 19" equipment), electrical work height control, lighting, soldering fume, etc. A client can customize the products and extend them to his own needs. The product is mainly used in the fields of R&D, service, maintenance, repair, calibration, small-scale production in the fields of electronics, such as appliances assembly, and in education.

Our customers can be found in the industry, utility companies, government, hospitals and technical/ scientific & educational institutes.

References

Amolf – TU-Delft – TU-Eindhoven – NXP – Intel – Fugro – Technolution – NUON powergeneration – Roy – NL Navy – Thales – TNO – RTD – Tokheim – DAF Trucks – Heineken – and many more.

Jan Straver
CEO

Nijverheidsweg 15
5627 BT Eindhoven
T: +31 (0)40 264 53 45
E: straver@elquip.com

www.elquip.nl
www.esd-winkel.nl
www.bkprecision.nl

elQuip™

Atkins BV

Atkins BV, part of Atkins Aerospace and Atkins Plc, is a leading multinational aerospace design and analysis consultancy, with over 17000 permanent staff worldwide.

Atkins Plc operates in multiple markets, including: Aerospace, Defence, Highways & Transportation, Oil and gas, Nuclear, Telecommunications, Rail, Water and Environment.

As a result we have access to a variety of engineering capabilities such as Atkins Nuclear. Qualified to AS9100 : 2004 rev. C across all offices

Product information

We design and analyse main components for many new aircraft programs, as have emerged onto the market over the past ten years such as the Airbus A380, A400 M and A350XWB, Lockheed Martin JSF and Mitsubishi Jet:

- Wing structure including integration of engine, landing-gear and movables
- High-lift devices
- Fuselage structure and interior
- Future aircraft program concept studies
- Structural integrity prediction methods development
- Landing gear systems & structures engineering services
- Engine components for low pressure compressor

For ITER-NL, Atkins performed an optimisation study of the concept for Remote Handling Tooling of the Port Plugs.

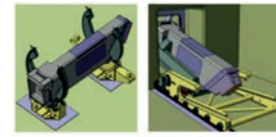
Specific expertise includes

Structural and mechanical engineering for large and complex international projects including integration and design for manufacturing.

- *Structures:* Light weight metallic and composites
- *Systems:* Landing gear, Controls, Fuel systems
- *Interiors:* cabin, cargo-hold, flight-deck
- *Aero Engines:* Compression & transmissions
- Our main tools are CATIA V5, Unigraphics NX, MSC PATRAN/NASTRAN, HyperMesh, PDM.

References

Our Customers include Airbus – Rolls-Royce – Fokker – Bombardier



Arent-Jan de Graaff
Head of Composites design, Aerospace

Parellaan 14
2132 WS Hoofddorp
T: +31 (0)235 64 50 10
E: arent-jan.degraaff@atkinsglobal.com
80+ employees

www.atkinsglobal.com

ATKINS

Thomas Thor Associates

A brief description of our business and main areas of expertise

Thomas Thor Associates provide Recruitment and Executive Search services to the global nuclear industry. Our clients include governments, regulators, utilities, operators, equipment manufacturers and supply chain organisations across the nuclear industry. With offices in Europe and the Middle East, we are set up to recruit nuclear professionals for our clients on an international scale. Our staff is multinational and multilingual and we have a live network of over 23,000 nuclear professionals globally.

What makes us different to our competitors?

- We are completely focused in the recruitment of professionals for the nuclear industry, both temporary and permanent staff.
- We have a successful track record in recruiting nuclear specialists for international clients and consortia.
- We are specialists in the international relocation of nuclear professionals.
- We represent multinational and multilingual experts in the nuclear industry.

Our network of candidates includes internationally mobile project and engineering specialists in new build, commissioning, operation and decommissioning in the following disciplines:

- Executive and Board Level Positions
- Project and Programme Management (design, construction and commissioning)
- Project Support and Control (Planning, Contract, Cost, Time Schedule)
- Safety (deterministic and probabilistic)
- Quality, Human Factors, Human Performance and Risk Management
- Licensing and Regulatory
- Process and Design Engineering
- Procurement, Supply Chain and Supplier Management
- Senior technical specialists – areas including I&C, HVAC, Thermo hydraulics, Reactor Physics
- Plant Operations and Maintenance
- Waste management and decommissioning strategy

The services that we offer

- Provision of interim/temporary consultants
- Recruitment of permanent staff (contingency, retained search, executive search and campaign management)
- Industry information and survey results

Kaoutar Belarbi
Marketing and Sales Intern

Keizersgracht 268
1016 EV Amsterdam
T: +31 (0)6 15 55 14 14
E: K.Belarbi@thomas-thor.com

www.thomas-thor.com

Thomas Thor associates

ATG Europe

ATG is recognized as a leading provider of specialized engineering, scientific and technical services to the Aerospace, High Tech and Offshore industry. With highly educated personnel operating in different branches ATG Europe provides access to the brightest minds. ATG has three main core competencies: Projects, People and Medialab.

ATG Projects

ATG Projects excels at delivering highly demanding engineering projects in the areas of structural, thermal and flow analysis. Our team of in-house engineers is experienced in analyzing and solving complex problems in demanding technical fields and industries. Major customers include the European Space industry, EADS/Airbus, Atlas Copco and Shell. From 2008 onward our focus has broadened to other challenging areas such as Offshore, Energy and High Precision. As an example ATG Projects has worked on structural parts of various Airbus aircraft, it has been responsible for the thermal design of the vegetation instrument on board the Belgian PROBA-V satellite and has given consultancy for the optimization of a supersonic gas separating system for Twister. Next to that it is and has been involved in various R&D projects ranging from investigations in new structural concept using composites to the development of a helicon plasma thruster.

ATG People

ATG People is the key player in delivering highly educated personnel for High Tech environments throughout Europe. Our brightest minds are engaged in innovative projects performing to high standards and utilizing the full extent of their professional knowledge. With our 30 years of experience we have access to the brightest minds in for instance structural, electrical, mechanical and automation engineering.

Medialab

ATG Medialab is our high-end 3D visualization studio that has the ability to visualize technical and scientific complex projects is unmatched worldwide. The outstanding reputation among customers is earned by the scientifically and technically sound visuals of complex subjects. Sectors of activities are the Aerospace, Semiconductors, Defense, Offshore and Energy industries.

References

ESA – OHB – Qinetiq – Kongsberg – ASML – TNO – EADS/Airbus – Lockheed Martin – Atlas Copco

Michiel Vullings
Manager Projects

Noordwijk Space Business Park
Huygensstraat 34
2201 DK Noordwijk (ZH)
T: +31 (0)715 79 55 61
M: +31 (0)6 205 45 105

www.ATG-Europe.com

Inno4Life

Your Engineering –to-pre-order Partner

Inno4Life specialises in complex customer-specific engineering-to-order projects for the Life Science Industries, namely the Pharmaticeuticals (Human and Veterinary), Medical and Food Industries. Requests from other industries will be considered on a case-by-case basis.

Our knowledge is deeply rooted in the automated pharmaceutical packaging industry, we have therefore the in-built expertise, discipline and the very specific know-how to help overcome the evolving challenges constantly faced by our customers in highly regulated markets.

Relying on the combination of many years of experience and skills in managing large-scale international projects, we offer a complete range of solutions in the following areas:

- Equipment & Support
- System Integration
- System Optimization
- Expert Advice

We supply a wide range of equipment and services in the field of automated high-production:

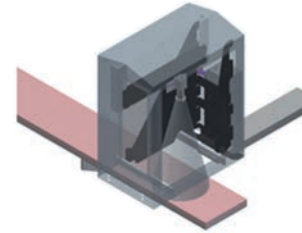
- System & Module Development
- System architecture design
  - engineering
  - prototyping
  - test equipment
- System improvement
  - validation
- Assembly
- Installation
  - service support

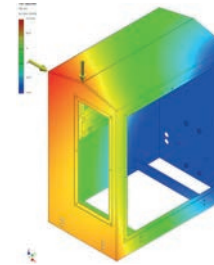
Inno4Life specialises in complex customer-specific engineering-to-order projects for the Life Science Industries, namely the Pharmaticeuticals (Human and Veterinary), Medical and Food Industries. Requests from other industries will be considered on a case-by-case basis. Our knowledge is deeply rooted in the automated pharmaceutical packaging industry, we have therefore the in-built expertise, discipline and the very specific know-how to help overcome the evolving challenges constantly faced by our customers in highly regulated markets.

Johan Klootwijk
Managing Director

Druivenstraat 5
4816 KB Breda
T: +31 (0)76 302 00 23
E: info@Inno4Life.com

www.Inno4Life.com





High Tech Institute

High Tech Institute facilitates the growth of individuals, teams or organizations, both in technical width, depth and in leadership and soft skills. The institute is trusted by leading high tech companies worldwide. Several of its courses are certified by the European Organization of Precision Engineering (Euspen).

All courses are available as open enrollment or as in house editions, which can also be customized. On request, we also develop tailor-made trainings, which are not part of our regular portfolio.

High Tech Institute was formerly known as Philips Centre for Technical Training (CTT). For decades researchers and scientists of Philips Research developed the technical trainings with their leading edge knowledge and CTT made them available for the people of the Philips product divisions.

In 2010 Philips decided to spin out the CTT activity and make its trainings available for the whole high tech ecosystem in The Netherlands. At that point Philips had spun out lots of hightech companies like NXP (chips) and ASML (lithography equipment), Fei (electron microscopes) and Panalitycal (analitical equipment).

The training portfolio of High Tech Institute is developed by specialized partners like Mechatronics Academy (mechatronics, design and vacuum technology), Tech to Prof (electronics and optics), Systems and Software Academy (system architecture and software technology) and Settels Savenije Friedrich (soft skills and leadership).

High Tech Institute acts als the marketing- and salesorganisatie for its content partners.

René Raaijmakers

Achtseweg Zuid 211
5651 GW Eindhoven
M: +31 (0)6 2931 32 81
E: rene@techwatch.nl

www.hightechinstitute.nl

HIGH TECH INSTITUTE

ILO's for Big Science

Name ILO / Affiliation	Email	Facility / organisation	Theme
Gerard Cornet	G.Cornet@sron.nl	ILO-Net coordinator	
Eric W. Boom	ericboom@upcmail.nl		Representing the Dutch Industry
Toon Verhoeven (FOM-DIFFER/ITER NL)	A.G.A.Verhoeven@differ.nl	ITER (F4E) – FR ESS/RID – SE JET (EFDA) – UK Asdex-U* – DE Wendelstein-7X* – DE IFMIF* (IEA)	Fusion facilities.
Rob Klöpping (FOM-Nikhef)	klopping@nikhef.nl	CERN – CH ESRF – FR ILL* – FR EMBL – DE DESY* – DE Neutrino Telescopen	Accelerator, neutron and X-ray facilities.
Jan Visser (FOM-Nikhef)	janvs@nikhef.nl	CERN – CH ESRF – FR	
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) **Michiel van Haarlem**	Halfwerk@astron.nl Haarlem@astron.nl	LOFAR – NL SKA SKA	Radio Telescopes.
Paul Hieltjes (SRON)	P.J.Hieltjes@sron.nl	ESA/SRON	Space Science.
Daniel van Beekhuizen (NSO)	d.vanbeekhuizen@spaceoffice.nl	NSO	Space
Hermen van der Lugt (Pallas)	hermen.vanderlugt@pallasreactor.com)	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.
Marck Smit (NIOZ)	Marck.Smit@nioz.nl		Coastal and Marine Research (including deep sea research and technology).
Rob van der Mei (CWI)			National research institute for mathematics and computer science in the Netherlands
Rik Linssen (RID)	r.j.linssen@tudelft.nl	RID TU Delft	Oyster, ionizing radiation related research, nuclear reactor.

Index

BigScience for business

NWO | Netherlands Organisation for Scientific Research

Dutch Scientific

where business and science meet

www.bigscience.nl