



Welcome to the world
of Printed Circuit Boards

V A R I O P R I N T





TRADITIONAL

Home is the place where your roots are, where you feel at ease.

Our home is the „Appenzellerland“ in Eastern Switzerland. When we say „A handshake – with us it still counts“ we talk about a variety of true values.

“Our stability builds trust”

ANDREAS SCHMIDHEINI, GENERAL MANAGER



And with this we mean trust, responsibility and reliability.

VARIOPRINT
stands for these values.

Pioneering spirit, flexibility, precision, stamina and continuity – are closely associated with our country. And in VARIOPRINT they live on. With us traditional values and high-tech products combine, and merge to a healthy company culture and thus guarantee our success in a globalized world.

Our experienced, competent, reliable employees are the basis and pre-condition for the positive development of the company.



Location Heiden

VARIOPRINT draws on its roots in Heiden, draws on its roots in Switzerland for the sake of tradition and for the future. Nestled in the rolling hills of the Appenzellerland, between the Saentis and Lake Constance, it offers the best conditions for an efficient working atmosphere, superior quality of life and is close to the border for our export business.



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MADE TO MEASURE

The best solution is always the solution that covers all requirements. This seems logical but takes a lot of tact and sensitivity, and requires experience, know-how and ambition.

“Passion drives us to innovative excellence.”

MOTIVATED TEAM



And the spirit to think ahead, think different.

VARIOPRINT
keeps this spirit alive.

PCB's are our customized products that combine a maximum of innovation, know-how, functionality and enhanced value. Made to measure means for us to know your wishes and requirements and to add them to the early development of your product. Instead of a product strategy with limited range we put our focus on individual customer solutions from one source.

The complex and challenging requirements of our customers inspire us to innovative achievements.



VARIOPRINT AG

VARIOPRINT was founded in 1970 in Heiden, Switzerland. In 1993 the long-serving management took over the company, and succeeded to position it in the technological top segment over the last 30 years. Today VARIOPRINT employs 150 members of staff, and is one of the leading technology suppliers in Europe.

Two modern plants, which are connected underground, the newest equipment, as well as clean and airy premises are the basis for customized, reliable solutions.





INTERNATIONAL

The satisfaction of our customers has always been our focus. Therefore it is important to know them thoroughly, their environment, their expectations and their application areas. Only in the cooperation between customer and company can an innovative, customized product be manufactured.

“Our multicultural, multilingual staff is our strength in international business.”

HERBERT GABRIELLI, SALES MANAGER



To be successful

VARIOPRINT

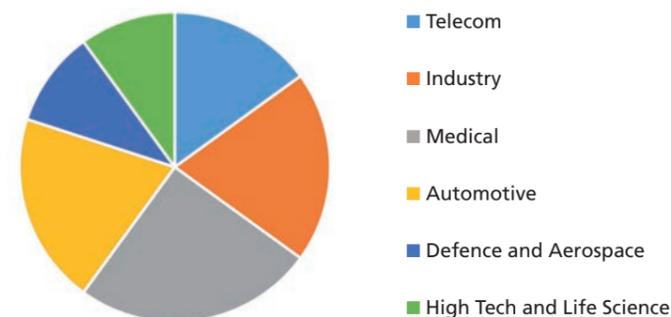
relies on these partnerships.

Personal relationships are an essential element in our customer service. A close relationship with our customers in Switzerland as well as internationally is therefore part of our everyday life.

Thanks to a well-balanced spread of our business over multiple markets, competent solutions, professional processing and a high degree of investment in new technologies, we are able to offer our tremendous know-how for a variety of industries and application areas.

Our target is the customer's satisfaction. The long-lasting satisfaction of the customer is deserving of best efforts.

Mixed industries and application areas:



Examples of application areas:

Telecom
Radio link systems
Antenna systems
Filters, Combiners
Receivers, Transceivers

Industry
Measurement and control technologies
Sensors
Controllers

Defence and Aerospace
Avionics
Control systems
Blackbox systems
Radio systems

Automotive
Driver assistance systems
Radartechnology, Antennas
Road pricing systems
LED lighting

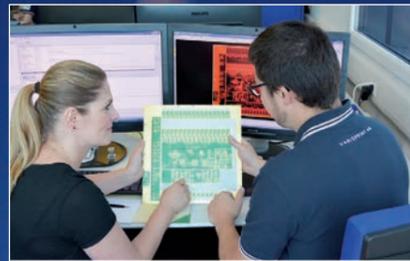
Medical
Cardiac pacemakers
Hearing aids, Defibrillators
Magnetic resonance systems

High Tech and Life Science
Watches
Smartphones
Wearables

Export

VARIOPRINT has an export share of over 80 percent and delivers to more than 30 different countries. In addition to European countries our PCBs are exported to the USA, South America and to Asian countries.





“We are oriented to your needs of the future.”

ROMEO PREMERLANI, TECHNOLOGY MANAGER



And the will,
to pave the way.

VARIOPRINT
is doing it.

Innovation is our motivating force. With a forward-looking and long-term oriented innovation policy and the constant search for new customer solutions, new materials, and new processing technologies we are always one step ahead. Thus we offer future oriented answers.

Only someone who stands firmly on good ground can be genuinely innovative.

VARIOPRINT finds an innovative solution for every requirement however complex it may be.

Two examples:

The most precise contour requirements with laser cut

For medical applications like hearing aids and implants we produce flexible or rigid-flex circuit boards that need extreme requirements concerning the board contours to the component positioning.

Processing of the entire material spectrum

Thinner PCB constructions with finer layouts require state-of-the-art processing equipment.



Modern laser systems with latest laser technology are at your disposal



Direct imaging with automatic loading and unloading systems for inner and outer layer as well as for solder mask

INNOVATIVE

A product is only as good as it is able to assert itself in the market.

Therefore we think ahead today for tomorrow. This requires a product development that anticipates the challenges of the future.



“Customized solutions are our strength.”

PRODUCT ENGINEERING



And has an eye for the essential
VARIOPRINT has this competence.

Innovative product designers and layouters need solutions that go far beyond the standards of today. Our technology team, consisting of several specialists, deals exclusively with these requirements. They test new materials, alternative constructions and develop processing technologies further.

We work out customer specific solutions. Fast and flexible, according to the needs of the market, to our customers.

Technology competence

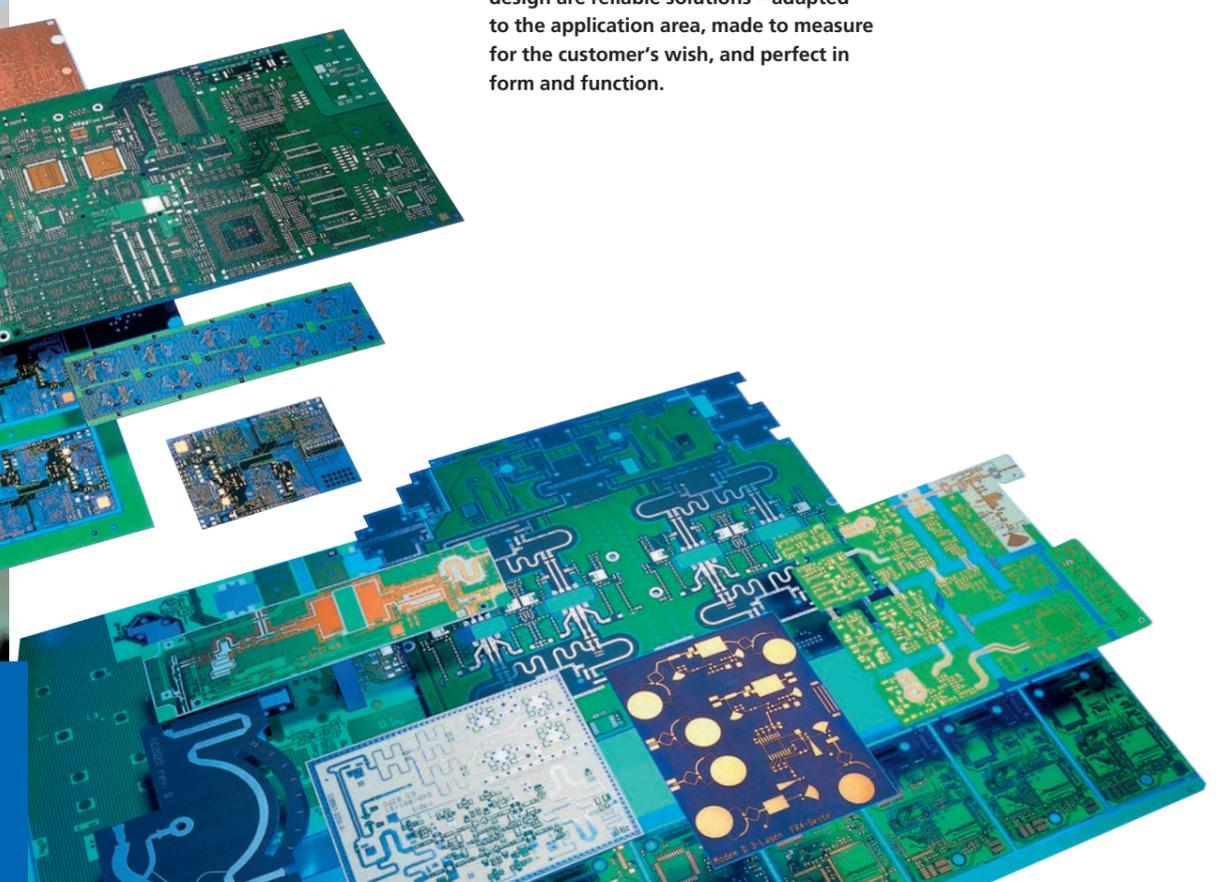
VARIOPRINT convinces with technology competence. The goals of every product design are reliable solutions – adapted to the application area, made to measure for the customer’s wish, and perfect in form and function.

InsightTechnology competence

11

COMPETENT

Competent is someone who knows what’s going on.
And knowing what is going on requires the necessary know-how,
the experience of many years, knowing the market.



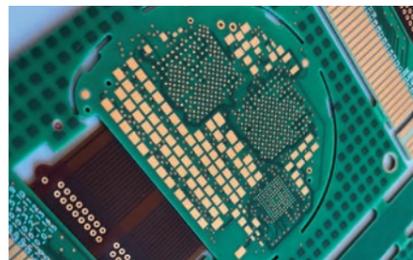


“Draw benefit from our technological competence.”

SASCHA FAUST, SALES ENGINEER

Technology Competence

VARIOPRINT convinces with long time experience. Examples of applications:



Flexible and rigid-flex-circuit boards

8 layers of rigid-flex board for implantable defibrillators

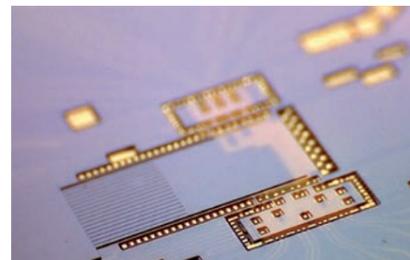
Polyimid – FR4 mixed structure
Blind- and buried vias
Laser contouring
ENIG surface for universal soldering processes.



High-frequency Technology

10 layer mix-board for 5G communication systems

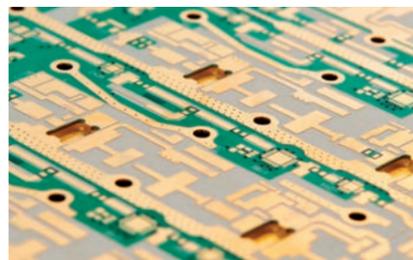
Construction with PTFE material, cavities and waveguide connection by using precise mechanical and/or laser machining
Application in frequency area of 60GHz.



EOCB Electro Optical Circuit Boards

22 layer multilayer mix-board for highspeed data communication

Mix build up with embedded optical waveguides enables data transfer up to 26 TBit/s.



Special technologies

Network amplifiers for radar systems in defence areas

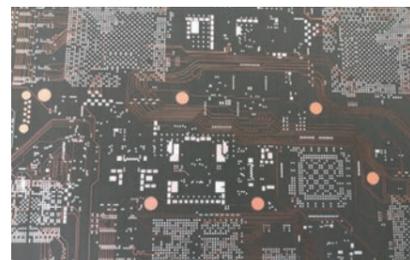
Challenge us! From mixed material constructions to partial heat-sink coins or metal core circuit boards we can offer you a wide scope of technology. From prototypes to serial production we are your partner for success.



HDI circuit boards

24 layer multilayers for control applications

Multilayer construction with halogen-free high TG material, blind- and buried vias, 50µm line/space, 0.4mm BGA structures, micro-via filling process.



Embedded circuit boards

18 layer multilayer with embedded capacitive and/or resistive layer for complex communication solutions

Multilayer construction with embedded capacitive and resistive foils to reduce passive components on the board surface saves space and enables more efficient board designs.

COMPETENT



“We strive for real partnerships, also with our suppliers.”

DANIEL HALTER, HEAD OF PURCHASING/IT

For our business partners all our business processes are comprehensible at all times – in administration as well as in production. This requires an honest and open communication.

TRANSPARENT



And a maximum of transparency
VARIOPRINT allows full insight at all times

Thanks to the project „Variopedia“ we have an universal data base at our disposal which is automatically integrated during the order processing procedure. In addition to a significant reduction of the through-put time the new system also allows a simple representation of complex processes. Well-arranged, clearly structured engineering data lead to higher process stability.

Overall Status: Thickness

Stackup Mode: Drill

Target: 2.5 mm (+ 0, - 0.25) , Actual: 2.39231 mm (+ 0, - 0) Over made on plated copper

Stackup Image

Stackup Details

no.	Layer	Type	Image	Plat.	Thk. (µm)	Q-Type	Er
1	Board	Board		µm	200	7620H	4.00
2	Prepreg	Prepreg		µm	55	106	4.00
3	Prepreg	Prepreg		µm	55	106	4.00
4	Prepreg	Prepreg		µm	200	7620H	4.00
5	Prepreg	Prepreg		µm	55	106	4.00
6	Prepreg / Ornd	Prepreg / Ornd		µm	1000	7620H	4.00
7	Prepreg	Prepreg		µm	55	106	4.00
8	Prepreg	Prepreg		µm	55	106	4.00
9	Prepreg	Prepreg		µm	55	106	4.00
10	Prepreg	Prepreg		µm	55	106	4.00
11	Prepreg	Prepreg		µm	55	106	4.00
12	Prepreg	Prepreg		µm	55	106	4.00
13	Prepreg	Prepreg		µm	55	106	4.00
14	Prepreg	Prepreg		µm	55	106	4.00
15	Prepreg	Prepreg		µm	55	106	4.00
16	Prepreg	Prepreg		µm	55	106	4.00
17	Prepreg	Prepreg		µm	55	106	4.00
18	Prepreg	Prepreg		µm	55	106	4.00
19	Prepreg	Prepreg		µm	55	106	4.00
20	Prepreg	Prepreg		µm	200	7620H	4.00

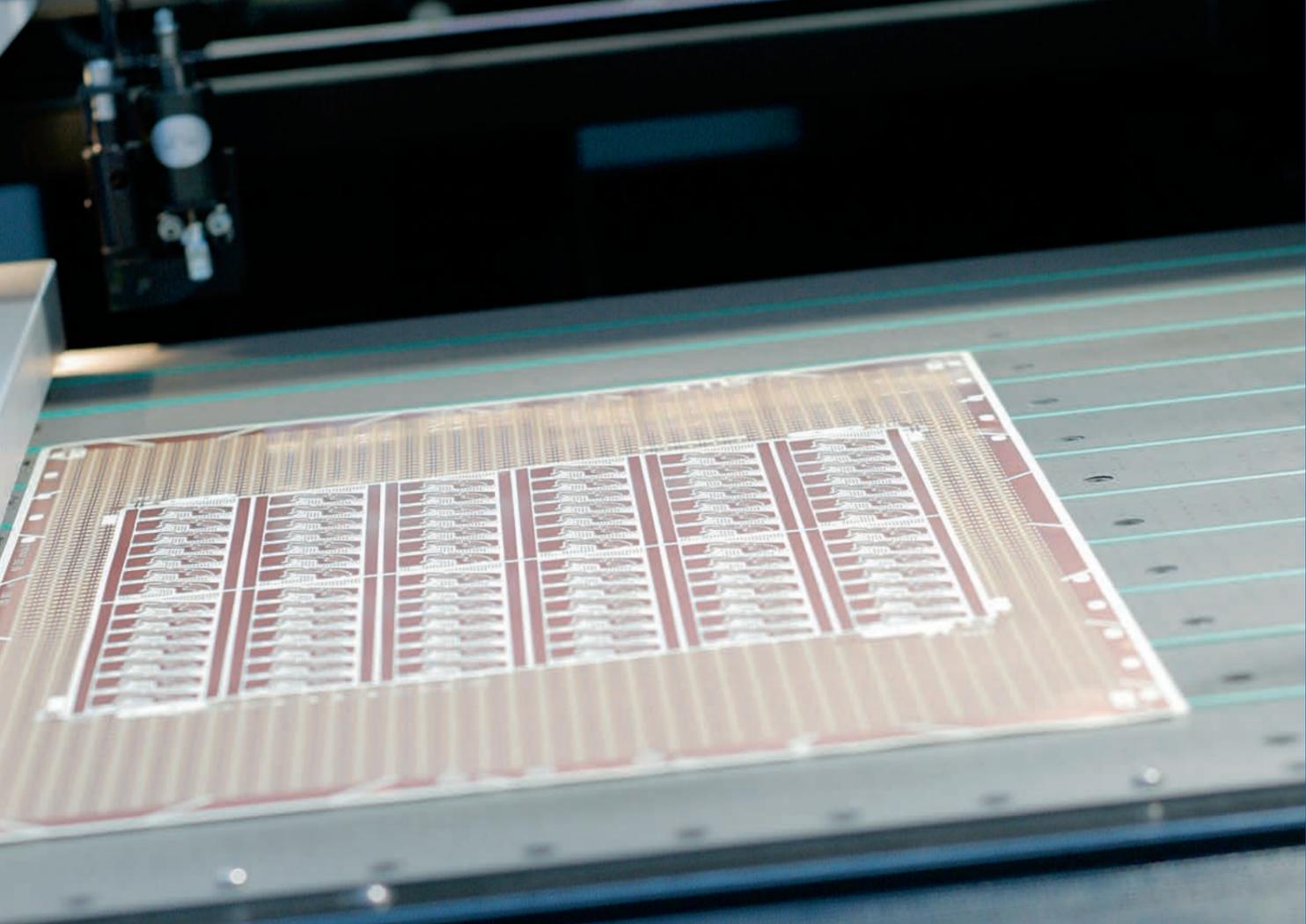
13

InsightMeans of communication

Direct communication with our engineering team

With a WebEx Meeting, the direct access to your data is possible at any time in order to co-ordinate with our CAM-specialist. Direct communication supports the processing of the most complex data and build up.





“Just-in-time deliveries are our creed.”

SVEN EHRAT, PRODUCTION MANAGER



And utilized for the best solution for the customer.

VARIOPRINT
invests in the future.

Constant progress is one of our main targets. Therefore we invest an annual two-digit percentage of our revenue in new equipment and processes and create thus the basis for future innovations.

Regular maintenance work (TPM) allow high disposability of the equipment and statistical process control (SPC) provides process stability, high yield and reliable delivery dates.



FORWARD-LOOKING

The most modern technologies make room for new things and are the basis for further development. They must be applied at the right time in the right place.



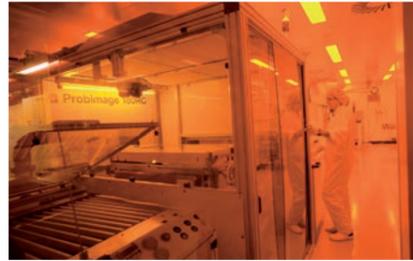
State of the art technology park
VARIOPRINT orientates towards the requirements of the future. Our most modern technology park can adapt flexibly to the various demands – new materials, complexity, formats, number of units (from very small to large-scale production), and provides the best conditions. VARIOPRINT is ready to turn all ideas in the field of PCB technology into successful solutions.



Specialized clean rooms for the production of flexible and rigid flexible PCBs

Modern clean room

Liquid resist facility (class ISO 3) and imaging in the modern clean room offer the best conditions for ultra fine line structures down to 25µm



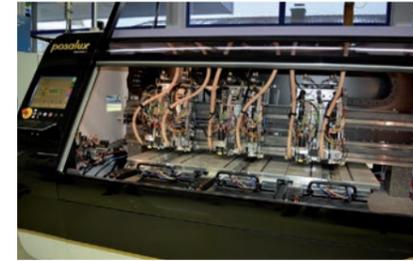
Multilayer presses

Vacuum aided 6-level presses with a temperature profile up to 350°C for special materials and pure Teflon structures



Precision drilling -and routing machines

With automatic loader and unloader systems, high frequency spindles, CCD camera registration systems and tool management control by iPads



Laser machining

Top modern systems with high-performance Pico-second laser allow high precision material removal with significantly reduced laser residue
24 W laser, 70 MW pulse peak performance



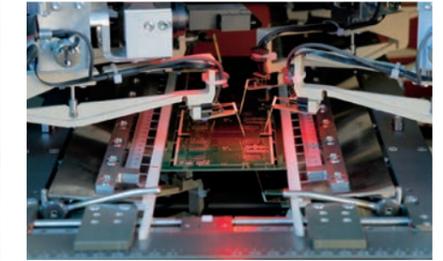
Modern plating equipment

Horizontal and vertical galvanic systems for panel and pattern plating processes
– highest aspect ratios
– microvia filling
– large variety of materials



Flying probe test

Several test systems with 16 fingers each and variable pressure to 2g, a minimum pitch distance of 100µm and a pad size of 50 µm



PRODUCTIVE

Optimised workflow, reliable processes, the most modern equipment, and a motivated team provide top productivity and reliability.

VARIOPRINT excels in keeping the scheduled delivery dates!



"We accept our responsibility to environment and nature."

CHRISTOPH HUTTER, TECHNICAL SERVICES

We consistently optimize the consumption of natural resources as water, copper or energy by constant investment in new technologies.



Start-up operation of a photovoltaic system on the roof of the new office building.

VARIOPRINT leaves no traces

VARIOPRINT takes up responsibility for the environment as well. Environment-friendly processes, a sensible and careful dealing with energy and chemicals and the ambition to reduce noise and pollution to a minimum. A continuous decline in energy and water consumption reduces emissions and is part of our environmental concept, far beyond the ISO 14001 guidelines.

We strive for a harmonious side by side relationship between nature and industry, of living and working.



EXCELLENT

The claim to combine and fulfill all requirements on the highest level is the foundation stone for a product of top quality.

For a perfect result each and every small detail has to be just right.



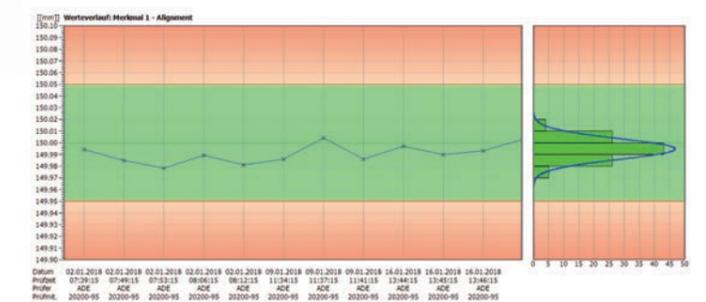
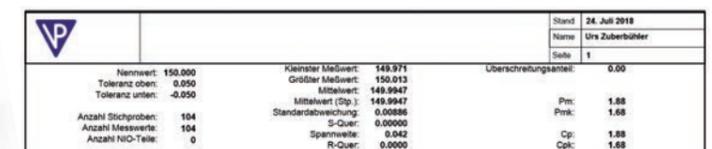
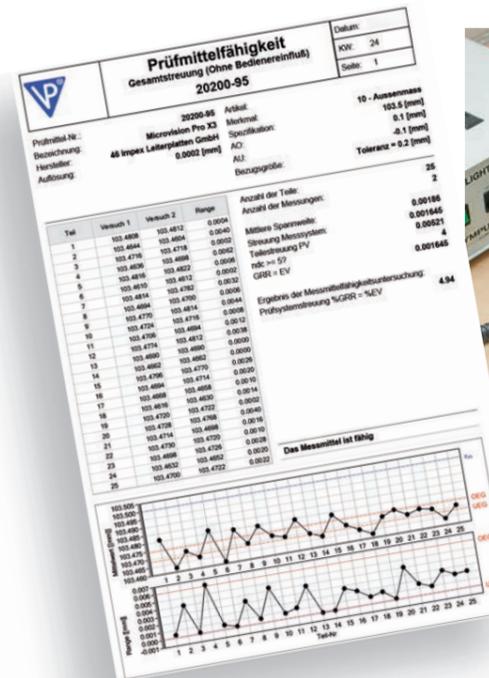
"Reliable quality is a constant."

URS ZUBERBÜHLER, HEAD OF QUALITY MANAGEMENT

And the single elements must join and work together perfectly
VARIOPRINT is a benchmark for top quality.

Quality has first priority with us. This starts in the very first meeting with the customer. It continues in processing the data and the making of the first prototypes, where extensive know-how, access to the resources and state of the art equipment are the crucial factors. And is finalized in an innovative and successful product.

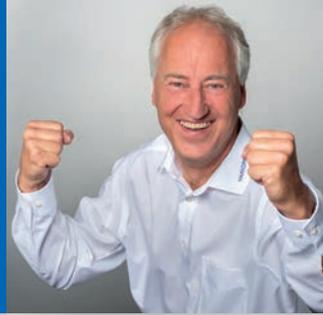
A process-oriented organization structure, Shop Floor Management, demanding proposals, premium systems and high competence of the staff in the decision-making processes allow continuous improvement.



In connection with the certification according to IATF 16949 VARIOPRINT has been successfully applying Q- tools as FMEA, MSA, SPC and PPAP for many years. Efficient software systems guarantee a norm-compliant process management, as well as complete traceability.

Trust
Responsibility
Reliability

varioprint.com



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