

■ **MONTRONIX**

Real Partnership.



We provide
tailor-made
solutions.
„Promised!“

Montronix[®]
MONITORING SOLUTIONS

Better be safe. Safely be better.

WELCOME. TO THE WORLD OF MONTRONIX.



As a leading supplier of solutions for process and tool monitoring, machine protection, and machine status analysis, we have already provided answers to the various problems of automotive manufacturing, machine tooling, and the air and space industry. We strive to combine the most progressive technologies with excellent customer service by customizing our technical and educational services. MONTRONIX process monitoring solutions lead to lower manufacturing costs as well as the identification and diagnosis of machine problems. Please call us for a personal consultation.

Waldemar Brunnmeier
Managing Director Montronix GmbH

MONTRONIX

- founded in 1990
- more than 100 employees worldwide
- 15 locations around the world
- more than 12.000 systems installed

CV:

Machine Construction

1987-1994 SPS Software development for special machines

1994-2000 Software development Part management/process control systems

2000-2002 System Manager IT-Services
MONTRONIX

2002-2003 Application Engineer

2003-2005 Software development

2005-2010 Manager R&D ppa.

since 2010 Managing Director

MONTRONIX COMPANY HISTORY.



Intelligent monitoring solutions for lean manufacturing

■ ABOUT US

History:

MONTRONIX was founded 1990 as spin-off of Kennametal, Inc.. Thanks to its progressive company philosophy, MONTRONIX quickly made a name for itself in this specialized field of industrial tool and process monitoring. Our top priority is customer satisfaction. Well over 5000 systems installed and the fact that end customers and machine tool builders worldwide have specified MONTRONIX systems as their standard speak for themselves – and for us!

MONTRONIX was acquired by the Swiss company Growth Finance AG in 2001 and relies on about 100 employees worldwide. This private group of investors focuses on the market segments process control and automation and invests in companies that emphasize future-oriented technologies and exhibit great potential for growth. With this kind of strategic and financial backing, MONTRONIX can develop and pursue long-term business initiatives.

FACT BOX

- 1981** Vision „Electronic Tool Monitoring“ by Q. McKenna
- 1990** Company founded as Kennametal Inc. spin-off
- 2001** Acquired by Growth Finance AG
- 2002** Launch of SPECTRA™ Process Monitoring
- 2003** Launch of PULSE machine protection
- 2008** Winner “Deutscher Industriepreis”
- 2010** Launch of CoDe collision protection

Solid finances, 5 global locations, our continuously improved products as well as an expanding spectrum of potential applications and reliable, user-friendly solutions make MONTRONIX your best partner in implementing a truly modern and lean production line.

Solution
Partner

Automation
Drives

SIEMENS



Winner Division
Production Engineering

SOLUTIONS THAT ONLY WE CAN OFFER.

■ RESEARCH AND DEVELOPMENT

MONTRONIX Solutions

Innovation is no accident! Our continuous dialog with manufacturers and production crews as well as the analysis of market research studies in the various disciplines lead to a comprehensive knowledge of the market as a whole. And understanding our customers' needs, concerns, and wishes enables us to recognize their needs.

Developing a true partnership with our customers, we ensure to use our combined knowledge toward application-oriented research and development:

Innovative, award-winning products are the result.



HIGHLIGHTS

- SPECTRA™ -hmi: executable in Siemens TCU, expanded statistics functions
- standardized sensor interface
- new and improved DSP
- driftless power sensors
- PS200 active power sensors
- Linux-based low cost touch panel
- Android Version (smartphone & others)

PROCESS MONITORING CUSTOMIZED FOR YOU.

*Manufacturing more safely, more effectively
and more economically - with Montronix!*

■ *MARKETING AND SALES*

Our sales and marketing team can do more for you. You are the focus of our business activities, we configure our products to exactly fit into your production lines and help to secure your success. We welcome your inquiries about:

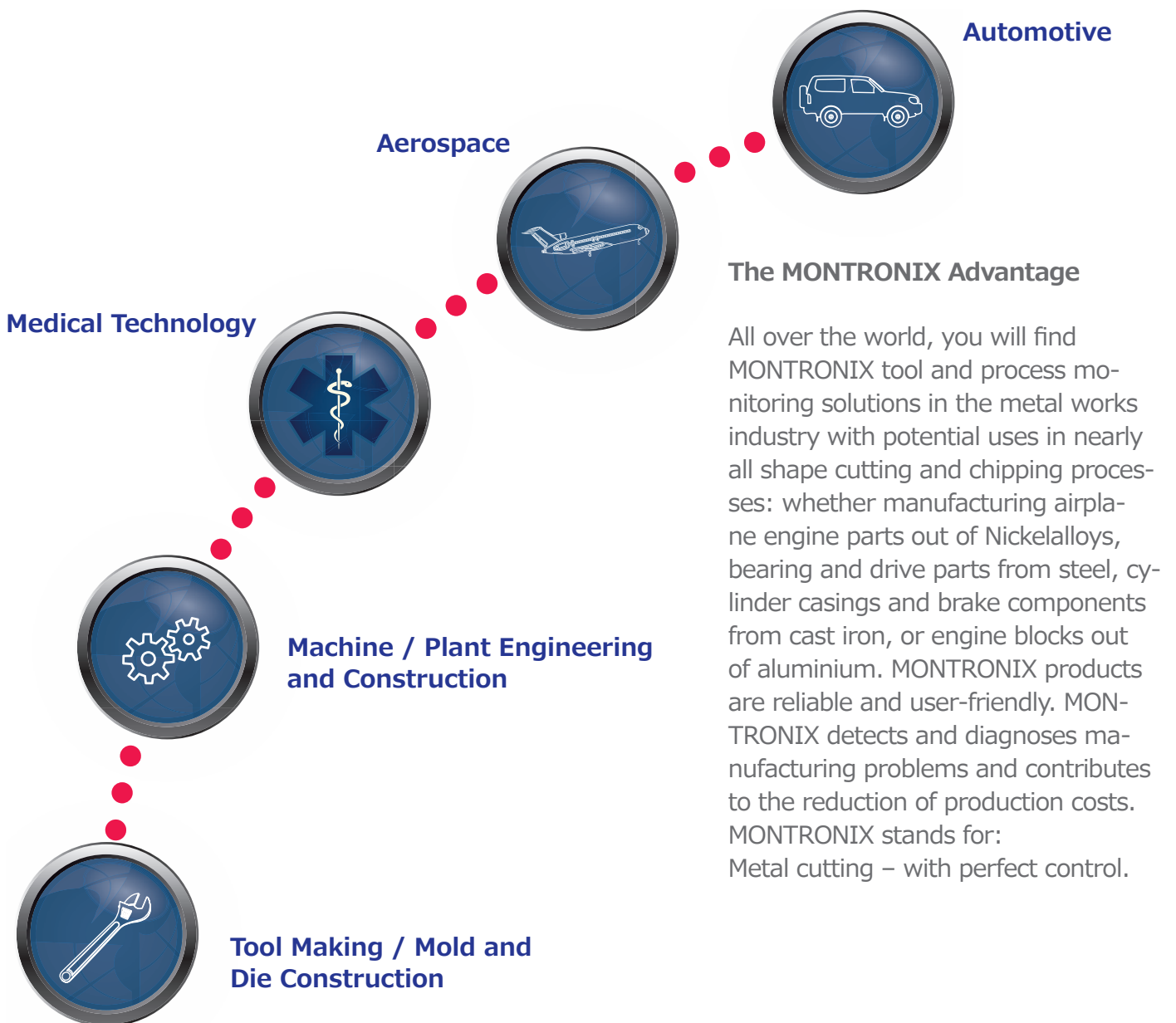
- Optimizing quotes and prices
- Managing product and service portfolios
- Product innovation
- value-based customer management



PROTECTED FROM DAY ONE.



■ *INDUSTRY SECTORS AT A GLANCE*

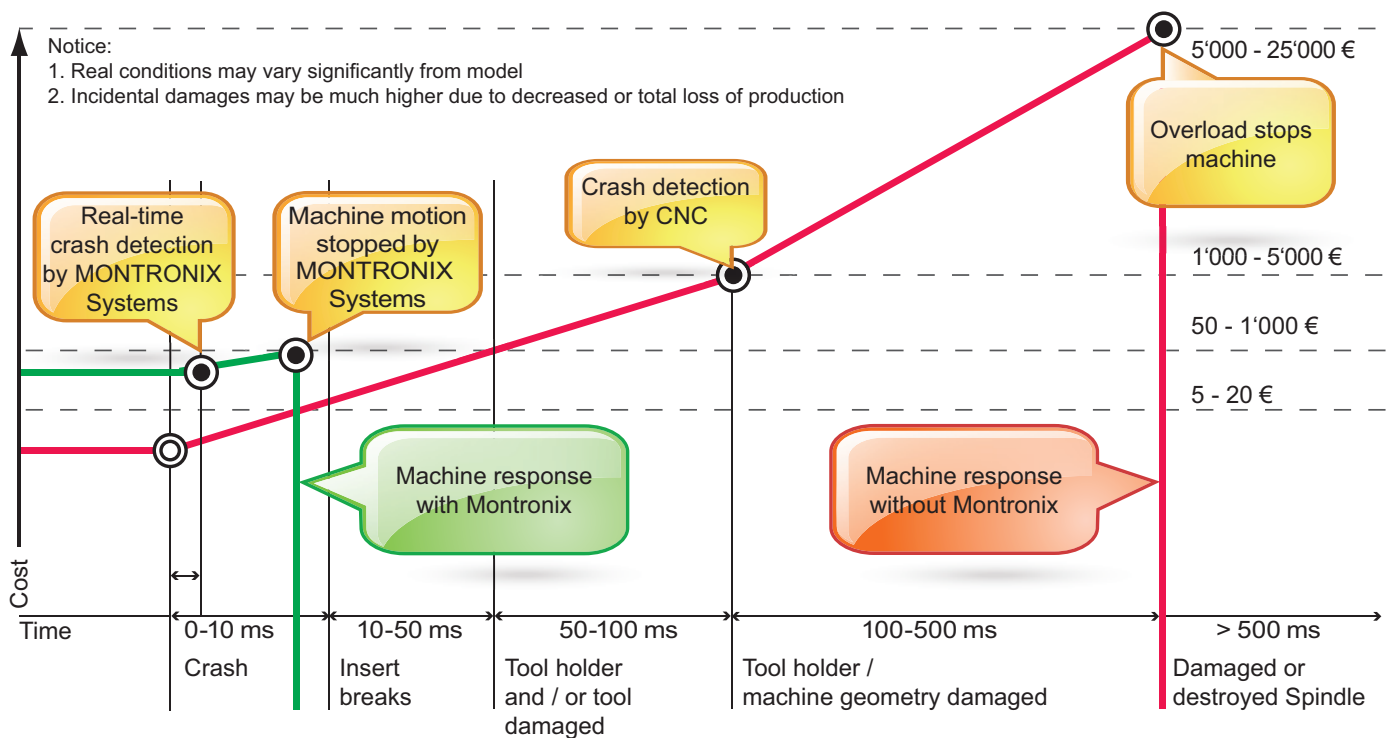


ADVANTAGES – ADDED VALUE.



Productivity, Flexibility, Quality, Safety

■ **COST – BENEFIT**



In today's ever-changing world market, companies must adhere to a strategy of optimally combining productivity, quality, and flexibility, thus creating the basis for continuous improvement. MONTRONIX solutions play a central role in defining and executing a successful manufacturing strategy.

MONTRONIX SOLUTIONS:

- Reduce costs by avoiding machine shut downs
- Optimize processing and station times
- Effectively generate and read analytical data
- Protect machines
- Protect tools
- Protect work pieces
- Assure work piece quality
- Secure the process chain for single- and multi-part production
- Optimize processes
- Assist with preventive maintenance
- Extend the service life of tools and machines

FLEXIBLE AND CONVENIENT.



■ *SERVICE & TECHNICAL TEAM*

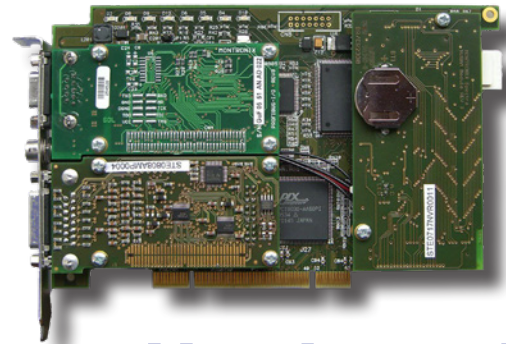
**Planned by us, serviced by us:
Your MONTRONIX Process Monitoring.**

Correct support is an integral part of an efficient and effective production. Our MONTRONIX service technicians make sure that your machines stay in motion. They are specialists experienced in most applications involving metal chipping, machine construction, NC and PLC, various drives, and bus systems. Every day, our team ensures that MONTRONIX monitoring solutions operate effectively and efficiently. In order to provide you with a custom solution to meet your productive needs and to match your particular processes, our MONTRONIX service team uses market-specific knowledge and specialized skills. Want help with the analysis and optimization of your production processes?

Initial machine start-up?

Ask us – we'll help and support you.

MONTRONIX branches and service centers can be found all over the world – there's one near you!



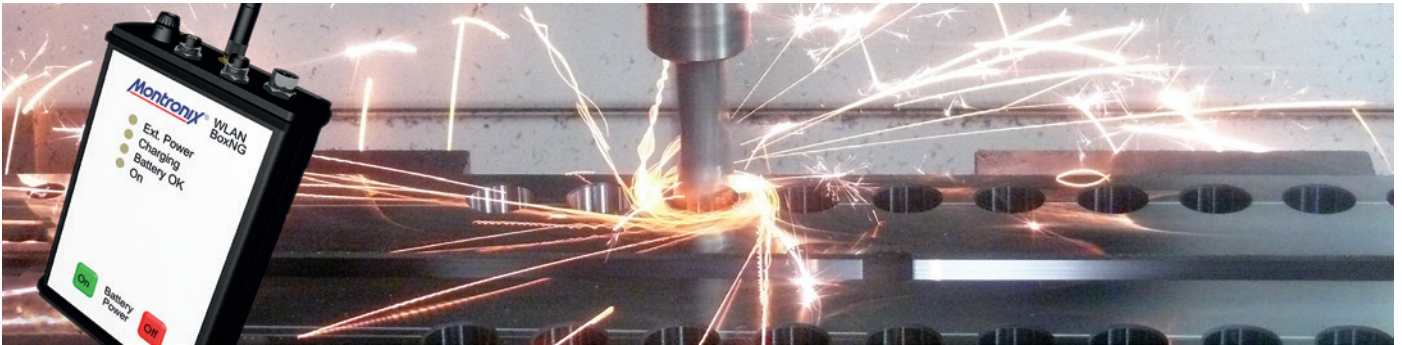
Montronix®
MONITORING SOLUTIONS

Better be safe. Safely be better.

MONTRONIX ENGINEERS & PROFESSIONALS

- install your systems
- perform machine start-ups
- train operators on location
- train users in-house
- provide first & second level support
- perform interface configurations
- organize workshops

PRODUCT DIVERSITY AND FLEXIBILITY



Our broad spectrum of sensors provides an optimal solution for almost every application need!

■ MODULAR SYSTEM

Sensors:

MONTRONIX develops and uses high technology sensors with signal optimization. Only clear signals offer optimal evaluation at the highest resolution possible. Sensorless process monitoring using (the control system manufacturer 's) digital drive data typically results in very high signal resolution. Intelligent sensors allow for very fine tuning of process adaptations.

Software

A completely new development, our MONTRONIX process visualization software SPECTRA™ -hmi is technology for the future:

- Select up to 12 sensor displays at once
- User administration with 7 passwordprotected access levels
- Offline log file player with filter functions
- Quality demonstration record – 100% documentation possible
- Optimize offline
- Remote diagnostics
- Data redundancy (SPECTRA™ and PC)
- Operating systems MS Windows® NT4*, 2000*, XP, VISTA, Windows® 7, Linux, Android (*limited)

Systems:

MONTRONIX system settings provide a “zoom” focus on your process within milliseconds and scan it in microseconds – with or without sensors! This is how MONTRONIX systems achieve the best possible process transparency. They can “see” events within processes. Intelligent algorithms provide various options for settings and analyses.

MONTRONIX systems will monitor a process with up to 3 signal sources (sensors) per cut / process.

PRODUCT HISTORY



CUSTOMER SATISFACTION IS EVERYTHING TO US.

■ **AFTER SALES SERVICE** *Leading to success - MONTRONIX team spirit*



After the sale is before the sale – as the old saying goes. Our relationship with you does not end with the sale, but instead we want it to grow into a true partnership lasting for the entire lifetime of our products. For this reason, we emphasize our MONTRONIX After Sales Services. With our quality services, we would like to reaffirm your decision to buy MONTRONIX products, enhance your satisfaction, and invest in a long-term partnership with our customers. So you can be sure that your MONTRONIX process monitoring will keep performing and will keep its value for years to come. We learn from our customers!

MONTRONIX POWER WHEREVER YOU LOOK.

■ EXCERPT FROM OUR CUSTOMER LIST

AUTOMOTIVE:

AUDI
BMW
CHRYSLER
DAF

DAIMLER
FIAT
FORD
GM

IVECO
MAN
MERCEDES BENZ
OPEL
PORSCHE

PSA PEUGEOT-
CITROËN
RENAULT
TATA
VOLKSWAGEN
VOLVO

AEROSPACE:

AIRBUS
BOEING

IRKUT
MIG
SUKHOI

UNITED AIRCRAFT-
CORPORATION

MACHINE MANUFACTURERS:

ALFING
CHIRON
DMG
EMAG

ELHA
EXTE TAR
FAMAR
GROB
HANDTMANN
HEYLIGENSTAEDT

HOFMANN
HURON
LIEBHERR
MAG
MANDELLI
MAZAK

MORI SEIKI
NILES
SCHENK
TRUMPF
UNIOR
VIGEL

ADDITIONAL CUSTOMERS:

AAM
AUERBACH
ALKOA
ALSTOM
BHARAT FORGE
BOSCH
BANG&OLUFSEN
CONTINENTAL
CATERPILLAR

CUMMINS
DELPHI
DRÄGER
DST
ELUMATEC
ERKERT
FAG
FEDERAL MOGUL
GRUNDFOS

INGERSOLL
KENNAMETAL
KKV
KRAUSECO
LUK
MAHLE
MEDIKOMP
MEILLER KIPPER
RABA

SIEMENS
STIHL
SKF
ZF
and many more

GLOBAL COMPETENCY



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