VISION LASER

FOR EFFICIENT LASER PROCESSING
OF SUPER-HARD TOOLS

Scan for
more info

NEW

C.O.R.E.®

WALTER

VISION LASER

APPLICATION

- Machining of rotationally symmetrical tools for a wide range of industries
- Production and regrinding of diamond-tipped tools
- Fully automated, complete machining in a single clamping cycle
- Materials MCD, CVD-D, PCD, carbide

MACHINE

- Low vibration, solid mineral cast iron, gantry type construction
- X, Y, Z linear axes with ball-type linear drive
- A, C rotating axes with torque motors
- Glass scales
- 2-axis LASER scan head
- 24" Full HD multitouch display
- FANUC, the global standard for control equipment
- Optional: robot loader 25
- Numerous efficiency options

SOFTWARE

- C.O.R.E. OS operating system
- GTR ProfDia
- Numerous software options to extend the system's performance and to increase its efficiency

« The VISION LASER combines the best of two worlds: a machine concept that has been tried and tested over many years meets future-oriented and highly innovative LASER technology. This unbeatable combination creates the ideal conditions for the efficient processing of super-hard materials. »

SILAS JUNGER, PRODUCT MANAGER SUPER-HARD MATERIALS

YOUR BENEFIT

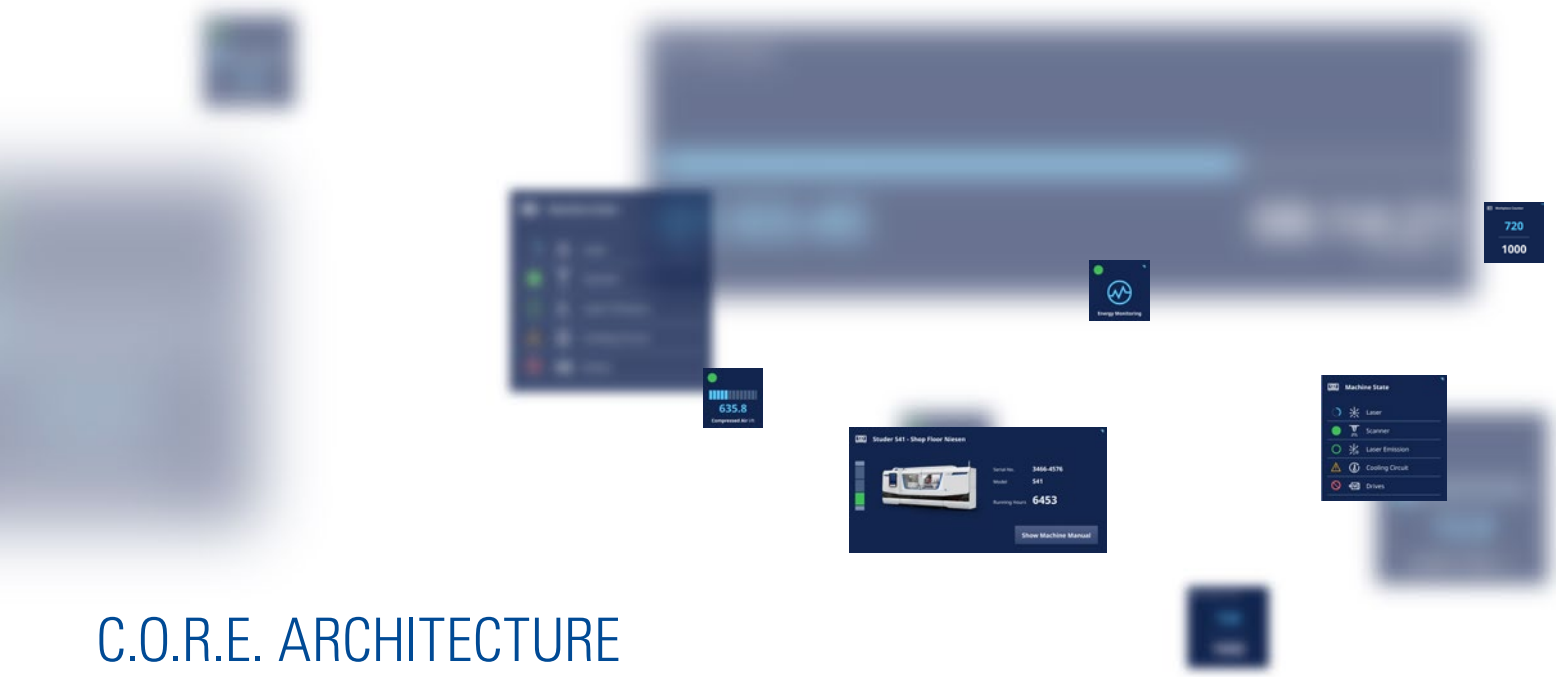
Our innovative LASER technology enables the contactless production of high-quality tools with extremely precise cutting edges, excellent surface finishes, and short production cycles. Compared to eroding, you work without consumables (dielectric or wire), which makes machining more cost-efficient and environmentally friendly.

Save resources and optimize your processes!

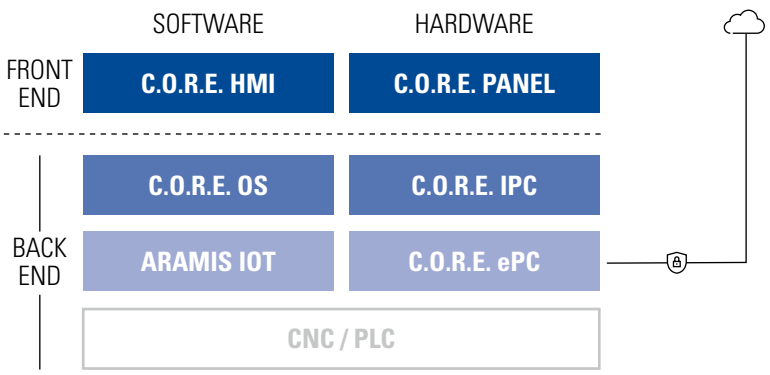
VISION LASER with the
optional robot loader 25 (left)

C.O.R.E. – CUSTOMER ORIENTED REVOLUTION

With C.O.R.E., we make your production fit for the digital future. The C.O.R.E. system from UNITED GRINDING is a future-oriented hardware and software platform that takes the operation, networking and digitalization of machine tools to a new level. C.O.R.E. was developed to make our machines and your production environment fit for the digital industry of tomorrow. Operation is simple and intuitive via the multi-touch display, with a modern and customizable user interface. Thanks to the standardized hardware and software architecture, all UNITED GRINDING machines equipped with C.O.R.E. technology are network-compatible and can be easily integrated into digital factories. All common interface formats are supported. C.O.R.E.'s modern IoT technology core also enables data-based value-added services and integration and communication with cloud-based customer platforms.



C.O.R.E. ARCHITECTURE



C.O.R.E. PANEL & HMI – NEXT-GENERATION MACHINE OPERATION

Like a large smartphone
With C.O.R.E., UNITED GRINDING has redefined the interaction between man and machine tool. Modern design combined with the most advanced technology to meet the operator requirements of tomorrow. The 24" multi-touch display enables navigation by touch and swipe gestures, similar to a smartphone. The uniform HMI for all UNITED GRINDING machines facilitates set-up, operation and general maintenance. Customizable user roles enable the display and restriction to role-relevant information and thus increase user-friendliness and safety. With the integrated front camera on the panel, assistance can be provided directly at the machine via Remote Service.

Future-proof
The digital capabilities of your machine with C.O.R.E. technology continue to grow. The C.O.R.E. HMI is continuously being expanded with new functionalities, widgets and apps to make it even more user-friendly and personalizable. The arrangement, type and size of the tiles on the HMI can be customized so that every machine operator always has the information that is important to him or her at a glance.

In future, new software updates and functionalities will be easy to install via the customer portal, so you will always be up to date.

Technical data
- 24" Full HD Multitouch-Display
- Override rotary switch with cycle start
- Standardized function keys
- Integrated 2-hand start
- Electronic key system (RFID)
- Integrated front camera
- Tilt adjustment

FURTHER DETAILS

EFFICIENT AND COMFORTABLE TO USE

Whether high-precision production or tool regrinding, volume production or the machining of special tools with a quantity of 1.

Thanks to modular automation systems and versatile efficiency options, the VISION LASER can be perfectly adapted to your individual requirements. Experience maximum flexibility and performance – tailor-made for your success!

Tool examples (from top left to bottom right):
2x profile milling cutters, 1x full radius plunge tool with LASER-engraved chip breaker
3x profile milling cutters, 1x full radius milling cutter, 1x jointing milling cutter

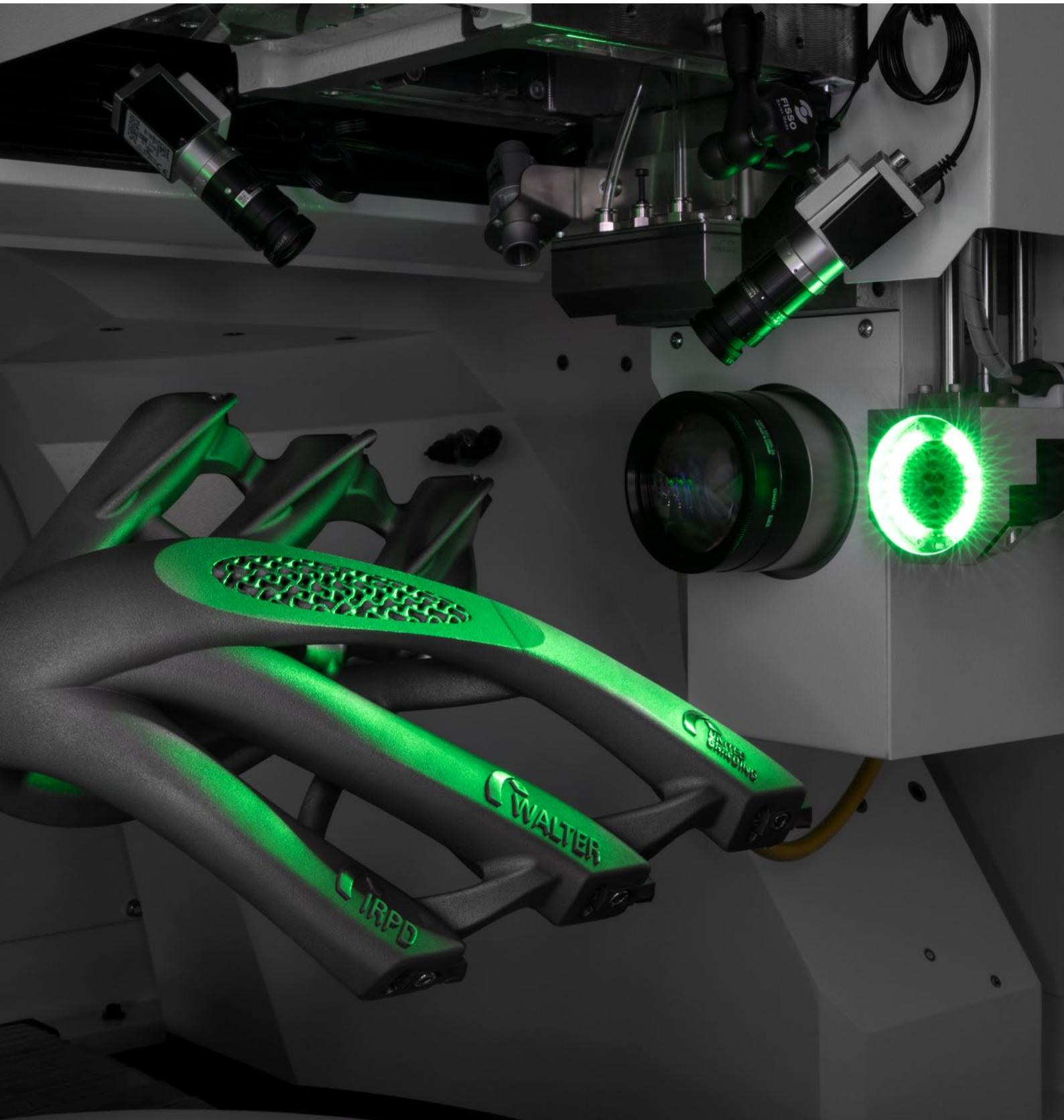


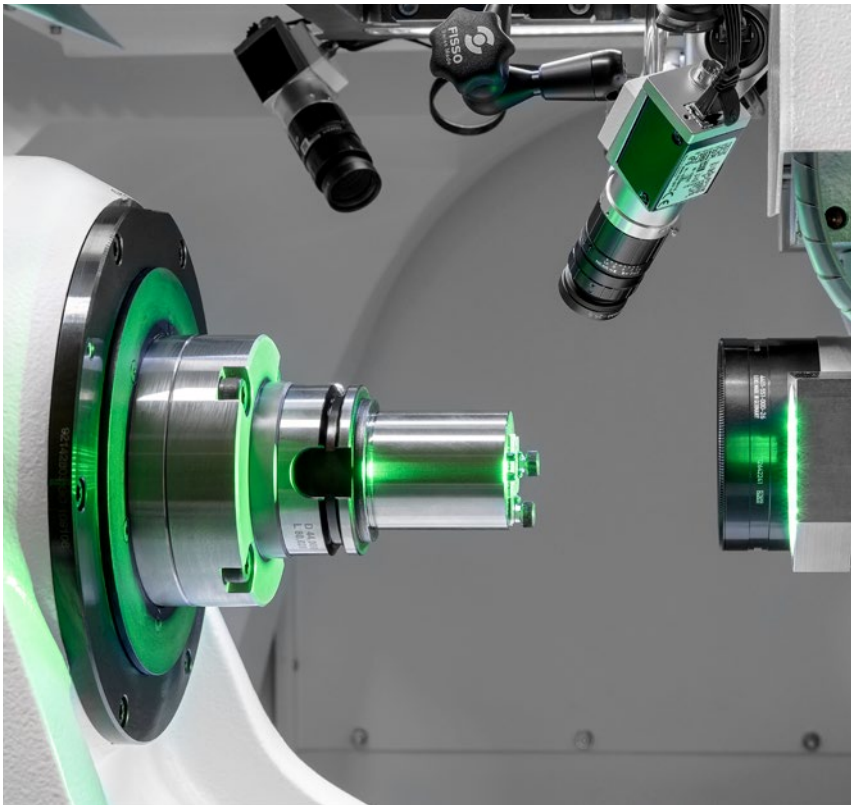




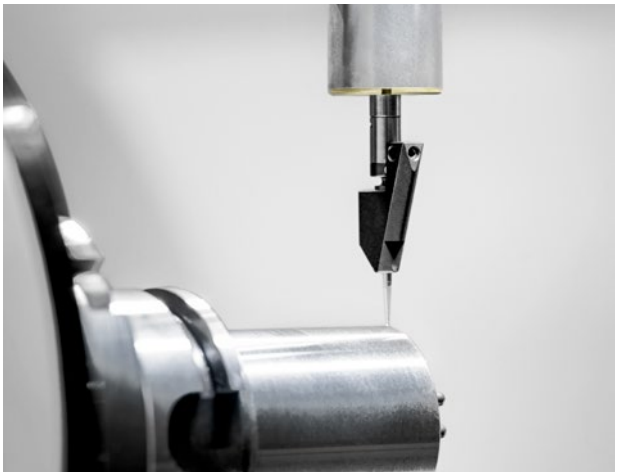

INNOVATIVE WALTER PROCESS TECHNOLOGY

Three in-process monitoring cameras
Maintain an overview: Our in-process monitoring cameras offer you precise process control, probing support, and convenient monitoring of machining operations. Use all cameras simultaneously in live mode or switch conveniently to full-screen mode for maximum efficiency and control.





Calibration camera (standard)
Automate your machine calibration with our high-precision measuring and calibration camera. Thanks to automatic routines for the focal plane and center of rotation, you achieve reliable, accurate results and thus maximum workpiece precision. The simple calibration routine saves time and ensures fast, efficient use – ideal for precise calibrations in the shortest possible time.



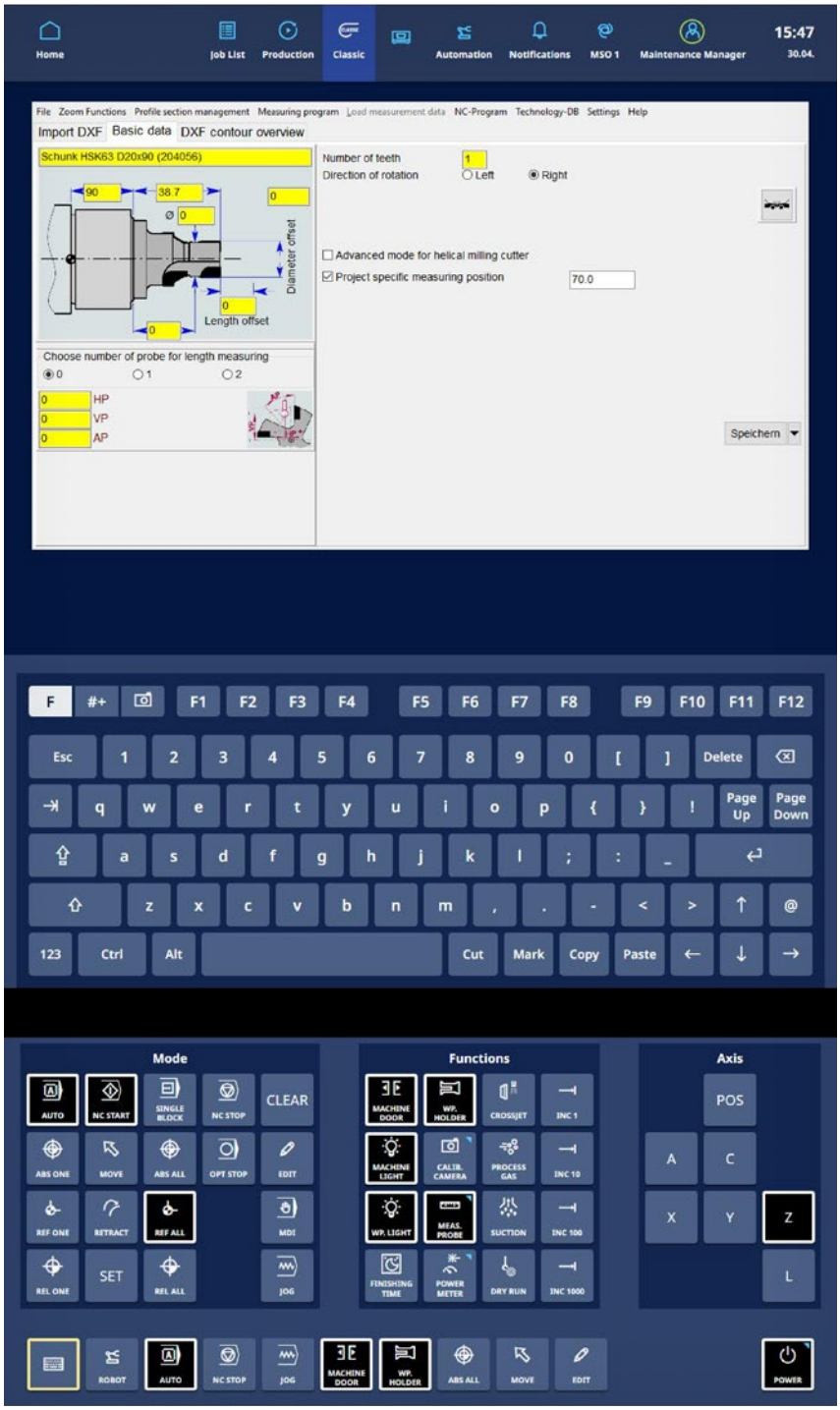
3D measuring probe with in-process measurement
Experience impressive accuracy: Our innovative LASER processing machine measures with a 3D measuring probe exactly where the processing takes place. This compensates for any unevenness caused by soldering the inserts. As a result, you achieve maximum precision in every step – for perfect results and maximum efficiency. Rely on technology that makes the difference!

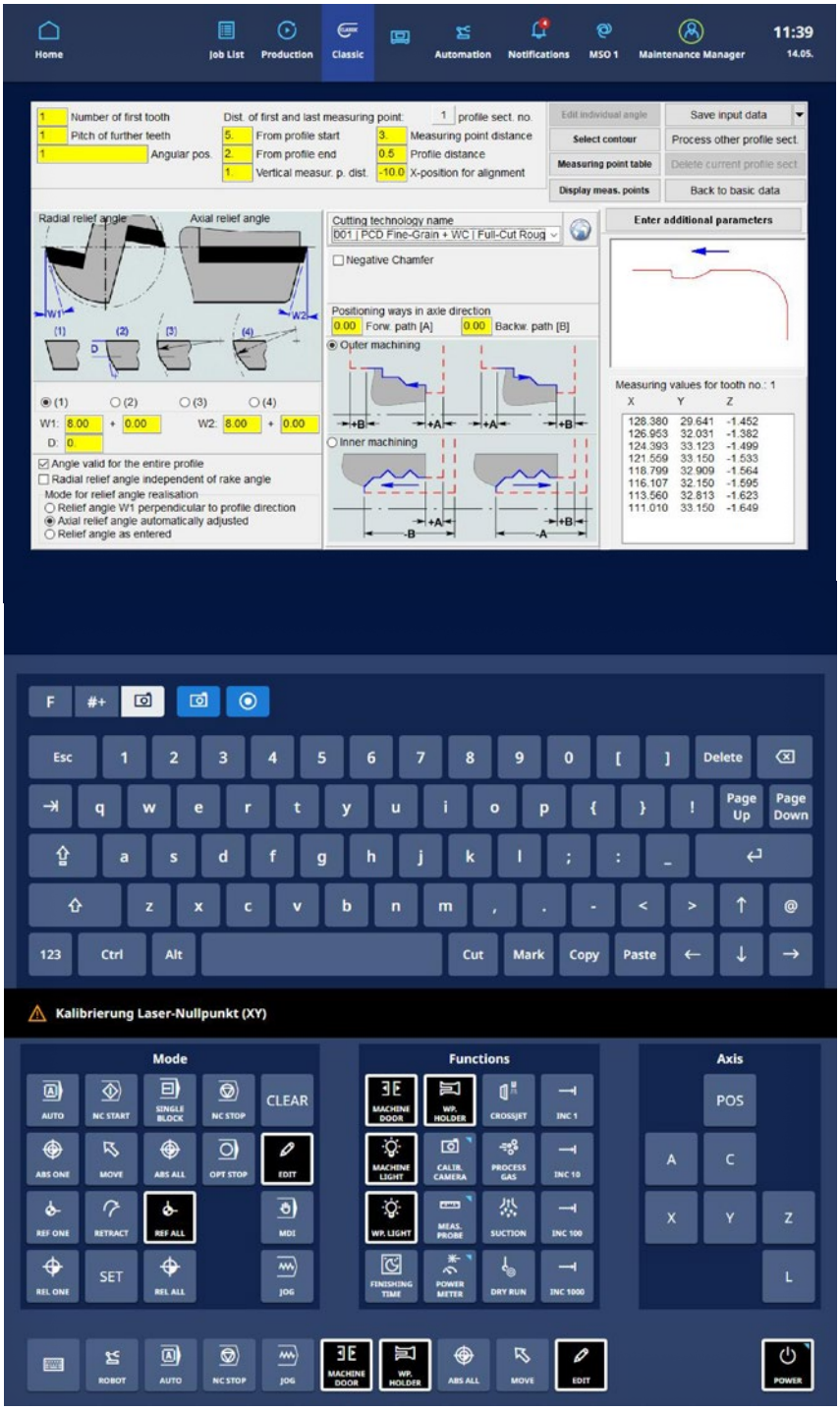
Customized flexibility
Discover innovative LASER technology from WALTER! Achieve super-sharp, virtually breakage-free cutting edges, precise cutting edge rounding, and customized chip geometry – for maximum precision and efficiency in your production.

PROVEN
GTR PROFDIA SOFTWARE

VISION LASER relies on the proven ProfDia software, enabling the seamless reuse of existing programs from conventional manufacturing processes such as wire EDM. Only the manufacturing process is changed. This allows you to quickly get started with LASER technology and immediately reap the benefits of this technology.

For you, this means simple operation, quick setup, and minimal training. An optimal combination for the precise and efficient processing of super-hard materials.

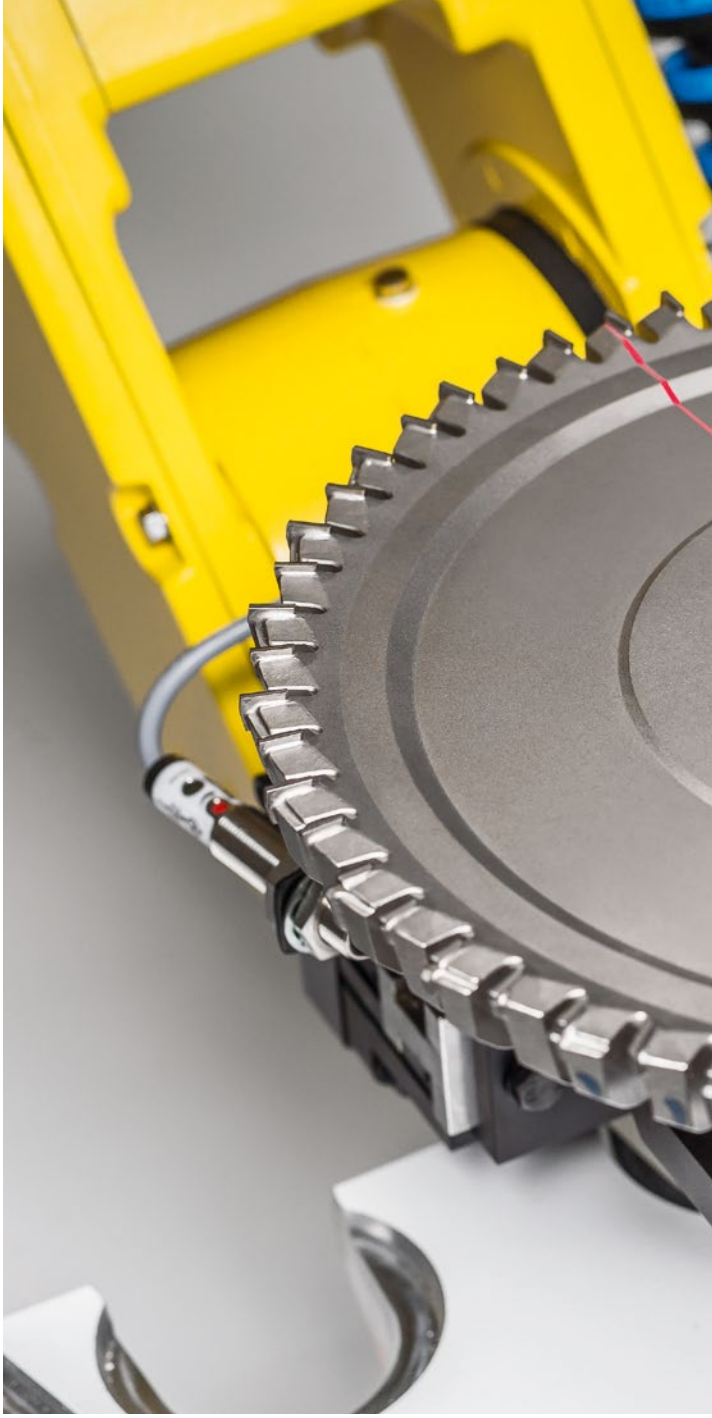


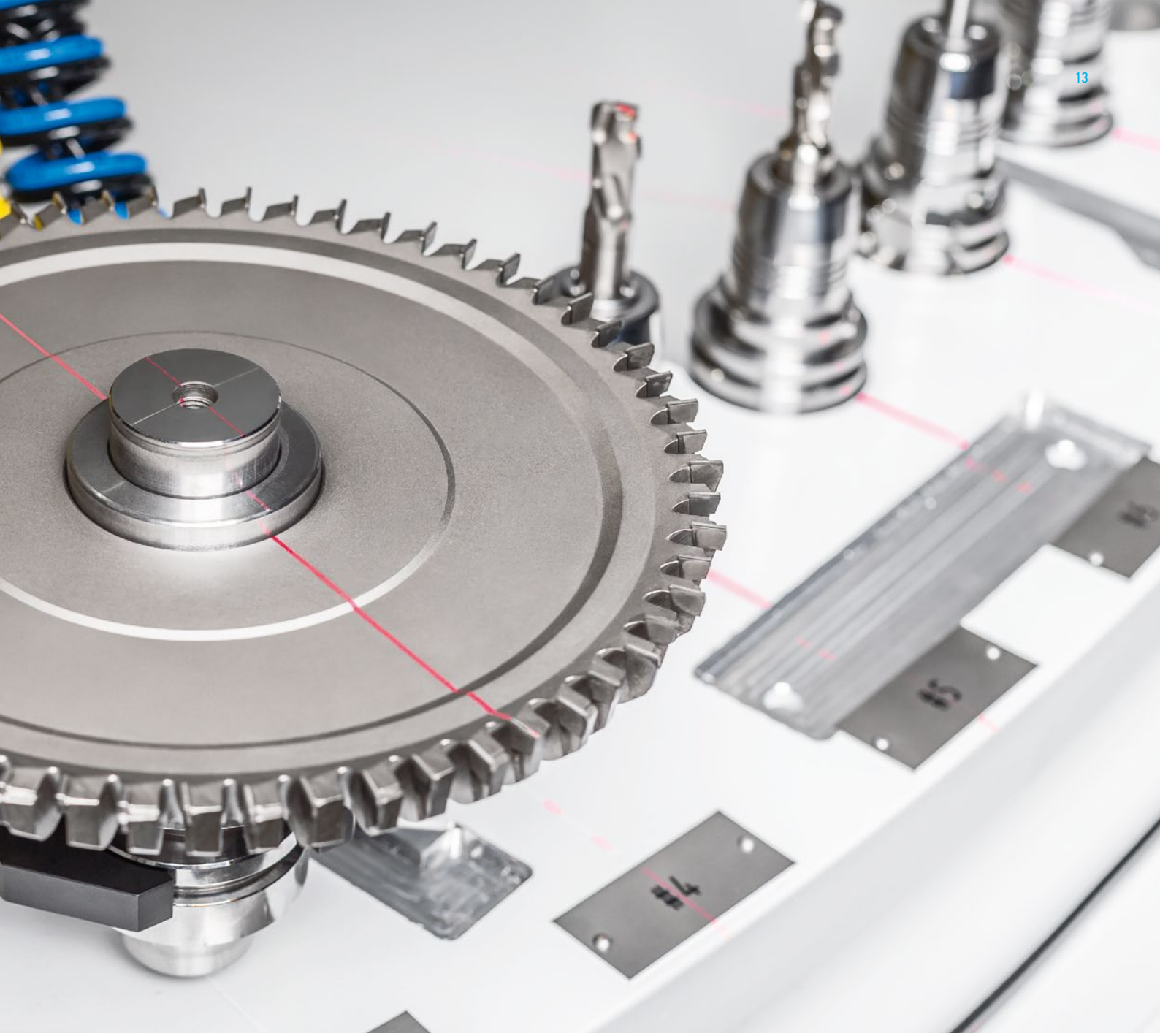

Home
Job List
Production
Classic
Automation
Notifications
MSO 1
Maintenance Manager
11:39
14.05.
Number of first tooth
Pitch of further teeth
Angular pos.
Dist. of first and last measuring point:
profile sect. no.
From profile start
From profile end
Vertical measur. p. dist.
Measuring point distance
Profile distance
X-position for alignment
Edit individual angle
Select contour
Measuring point table
Display meas. points
Save input data
Process other profile sect.
Delete current profile sect.
Back to basic data
Radial relief angle
Axial relief angle
Cutting technology name
001 | PCD Fine-Grain + WC | Full-Cut Roug
Negative Chamfer
Enter additional parameters
Positioning ways in axle direction
Forw. path [A]
Backw. path [B]
Outer machining
Inner machining
Measuring values for tooth no.: 1
X Y Z
128.380 29.641 -1.452
126.953 32.031 -1.382
124.393 33.123 -1.499
121.569 33.150 -1.533
118.799 32.909 -1.564
116.107 32.150 -1.595
113.560 32.813 -1.623
111.010 33.150 -1.649
Angle valid for the entire profile
Radial relief angle independent of rake angle
Mode for relief angle realisation
Relief angle W1 perpendicular to profile direction
Axial relief angle automatically adjusted
Relief angle as entered
Kalibrierung Laser-Nullpunkt (XY)
Mode
Functions
Axis
AUTO
NC START
SINGLE BLOCK
NC STOP
CLEAR
ABS ONE
MOVE
ABS ALL
OPT STOP
EDIT
REF ONE
RETRACT
REF ALL
MDI
REL ONE
SET
REL ALL
JOG
MACHINE DOOR
WP. HOLDER
CROSSJET
INC 1
MACHINE LIGHT
CALIB. CAMERA
PROCESS GAS
INC 10
WP. LIGHT
MEAS. PROBE
SUCTION
INC 100
FINISHING TIME
POWER METER
DRY RUN
INC 1000
POS
A
C
X
Y
Z
L
ROBOT
POWER

ROBOT LOADER AUTOMATION OPTION

Robot loader 25
For tools in an HSK holder with a total weight of up to 20 kg and a tool diameter of up to 320 mm in combination with the VISION LASER. Thanks to the innovative, recently developed "Process Manager" loader software, "chaotic" loading on up to 7 pallet levels is now possible. An automatic diameter determination is also optionally available and ensures a smooth, automated and flexible production sequence.

Capacity of the available pallets:
- 21 tools, max. diameter 320 mm
- 28 tools, max. diameter 220 mm
- 70 tools, max. diameter 105 mm




#4
#5

CUSTOMER CARE

WE ARE HERE FOR YOU!

WALTER and EWAG deliver systems and solutions worldwide for all areas of tool machining. Our claim is based on ensuring maximum availability of our machines over their entire service life. For this we have thus bundled numerous services in our Customer Care program.

Our products are designed to meet customer demands for as long as possible, they are intended to operate efficiently, reliably, and be available at any time.

From "Start up" through to "Retrofit" – our Customer Care is there for you throughout the working life of your machine. For this reason, you can rely on competent HelpLines worldwide and Service Engineers near you:

- We will provide you with fast, straight-forward support.
- We will help to increase your productivity.
- We work professionally, reliably and transparently.
- We will provide a professional solution to your problems.

DIGITAL SOLUTIONS

Digital Solutions stand for products and services that open up the data space of your machine through IoT-based networking, enable seamless integration across the entire store floor in digital value-added networks and provide data-based value-added services and digital services – for greater efficiency, productivity and competitiveness.

You can find out more about the services of Digital Solutions on our website under the Customer Care section.

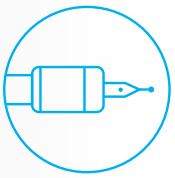
Start up
Commissioning
Extension of the guarantee

Qualification
Training
Product support

Prevention
Maintenance
Inspection

Service
Customer service
Customer advice
Helpline

Digital Solutions
Remote Service



Material
Spare parts
Replacement parts
Accessories

Rebuild
Machine overhauling
Refurbishing of assemblies

Retrofit
Conversions
Retrofitting parts

TECHNICAL DATA, DIMENSIONS

MECHANICAL AXES

Total number of axes	5
Drive X, Y, Z	Linear drive
X-axis	500 mm
Y-axis	350 mm
Z-axis	700 mm
Drive C	Torque
C-axis (swivelling range)	± 150°
Drive A	Torque
A-axis speed	750 min^{-1}
Linear resolution	0.0001 mm
Radial resolution	0.0001°

OTHER

Base	Mineral casting
Gross load weight	approx. 5,500 kg
Connected load	20 kVA

TOOL DATA

Tool holder	HSK 63
Min. / Max. workpiece diameter	3 mm / 250 mm (up to 300 mm)
Max. workpiece length	400 mm
Max. workpiece weight	50 kg
Max. workpiece weight with robot loader 25	20 kg

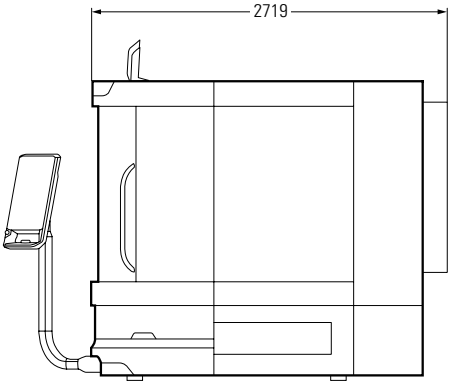
OPTIONS

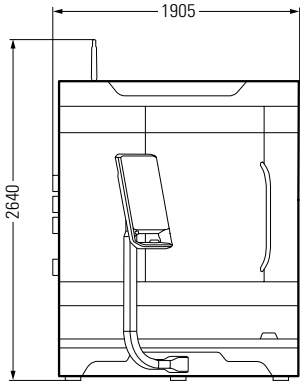
Automation options
Robot loader 25

Software / Efficiency options
Chip breaker

Coolant system
On request

Other options
Automation upper plate; Automatic, electrical measurement of the machine reference; three in-process monitoring cameras; extraction and filter unit





VISION LASER

Dimensions in mm. Options, accessories or open doors can increase the dimensions of the machine. Subject to modifications due to technical progress and errors. No guarantee is provided for this information.

CREATING TOOL PERFORMANCE

We are a global leader among market-oriented technology and service companies, and a system and solution partner for all areas of tool machining. Our range of services is the basis for innovative machining solutions for practically all tool types and materials typical for the market with a high degree of added value in terms of quality, precision, durability and productivity.

GRINDING

Grinding of rotation-symmetrical tools and workpieces, as well as indexable inserts

Machines	Use | Materials	Tool dimensions[1] max. length[2] / diameter
HELITRONIC G 200	P R HSS TC C/C	235 mm / Ø 1 – 125 mm
HELITRONIC RAPID	P R HSS TC C/C CBN	255 mm / Ø 1 – 100 mm
HELITRONIC MINI PLUS	P R HSS TC C/C CBN	255 mm / Ø 1 – 100 mm
HELITRONIC RAPTOR	P R HSS TC C/C CBN	280 mm / Ø 3 – 320 mm
HELITRONIC POWER 400	P R HSS TC C/C CBN	520 mm / Ø 3 – 315 mm
HELITRONIC VISION 400 L	P R HSS TC C/C CBN	420 mm / Ø 3 – 315 mm
HELITRONIC MICRO	P HSS TC C/C CBN R HSS TC C/C CBN	220 mm / Ø 0.1 – 12.7 mm 220 mm / Ø 3 – 12.7 mm

EROSION

Eroding and grinding of rotation-symmetrical tools

Machines	Use | Materials	Tool dimensions[1] max. length[2] / diameter
HELITRONIC DIAMOND EVOLUTION	P R HSS TC C/C CBN PCD	185/255 mm / Ø 1 – 165 mm
HELITRONIC RAPTOR DIAMOND	P R HSS TC C/C CBN PCD	270 mm / Ø 3 – 400 mm
HELITRONIC POWER DIAMOND 400	P R HSS TC C/C CBN PCD	520 mm / Ø 3 – 380 mm
HELITRONIC VISION DIAMOND 400 L	P R HSS TC C/C CBN PCD	420 mm / Ø 3 – 315 mm

LASER

Production of tools with laser

Machines	Use | Materials	Tool dimensions[1] max. length[2] / diameter
VISION LASER	P R TC CVD-D PCD MCD	400 mm / Ø 3 – 250 (300) mm

MEASURING

Contact-free measurement of tools, workpieces and grinding wheels

Machines	Use	$E_{UX,MPE}$-value	Tool dimensions[1] max. length[2] / diameter
HELICHECK PRO	M	(1.2 + L/300) µm	300 mm / Ø 1 – 200 mm
HELICHECK PRO LONG	M	(1.2 + L/300) µm	730 mm / Ø 1 – 200 mm
HELICHECK PLUS	M	(1.2 + L/300) µm	300 mm / Ø 0.1 – 200 mm
HELICHECK PLUS LONG	M	(1.2 + L/300) µm	730 mm / Ø 0.1 – 200 mm
HELICHECK NANO	M	(1.2 + L/300) µm	120 mm / Ø 0.1 – 16 mm

AUTOMATION

Solutions for complete tool production: From loading systems that are integrated into the machine's working area to robot loaders and Automated Tool Production (ATP), our innovative solution for networking grinding, eroding and measuring machines from WALTER.

SOFTWARE

The intelligence of tool machining and measuring for production and regrinding

CUSTOMER CARE

Comprehensive range of services

[1] The maximum tool dimensions depend on the type of tool and its geometry, as well as the type of machining.
[2] From theoretical taper diameter of the workpiece holder.

Use: P Production R Regrinding M Measuring
Materials: HSS High speed steel TC Tungsten carbide C/C Cermet/ceramics CBN Cubic boron nitride PCD Polycrystalline diamond
CVD-D Chemical vapour deposition MCD Monocrystalline diamond

WALTER MASCHINENBAU GMBH

WALTER has produced tool grinding machines since 1953. Today, our product range is supplemented by tool eroding machines and fully automated CNC measuring machines of the HELICHECK series for contactless complete measurement of tools and production parts.

Walter Maschinenbau GmbH is a company of the UNITED MACHINING SOLUTIONS. Together with EWAG, we consider ourselves to be a supplier of systems and solutions for the complete machining of tools and can offer a wide range of products, including grinding, eroding, laser machining, measurement and software.

Our customer focus and our global sales and service network of company-owned locations and employees has been appreciated by our customers for decades.


Grinding


Eroding


Laser


Measuring


Automation


Software


Customer Care

ABOUT US

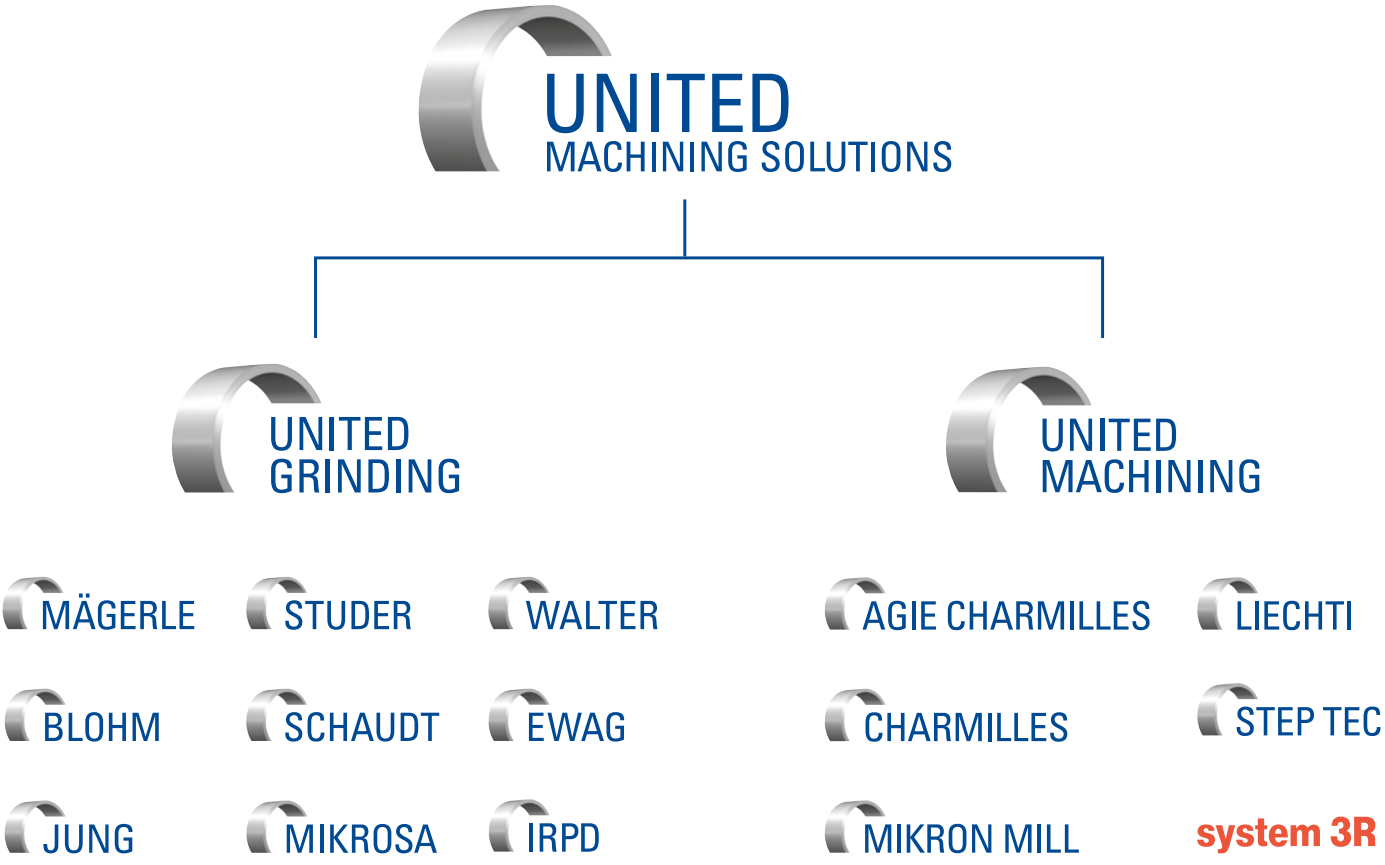
UNITED MACHINING SOLUTIONS

UNITED MACHINING SOLUTIONS is one of the largest machine tool manufacturers in the world. With around 5,000 employees at over 50 global production, service and sales locations, UNITED MACHINING SOLUTIONS is close to its customers and highly efficient. The group is organized into two divisions: UNITED GRINDING and UNITED MACHINING.

UNITED GRINDING includes the brands MÄGERLE, BLOHM, JUNG, STUDER, SCHAUDT, MIKROSA, WALTER, EWAG and IRPD. Its technologies include surface and profile grinding machines, cylindrical grinding machines, machines for tool machining and machine tools for additive manufacturing.

The UNITED MACHINING division includes the brands AGIE CHARMILLES, CHARMILLES, MIKRON MILL, LIECHTI, STEP TEC and SYSTEM 3R. It includes machines for EDM (Electrical Discharge Machining), high-speed milling and laser technology as well as spindle production and automation solutions.

"We want to make our customers even more successful"



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