LASER P

400 / 400 U



CHARMILLES

A member of UNITED MACHINING SOLUTIONS

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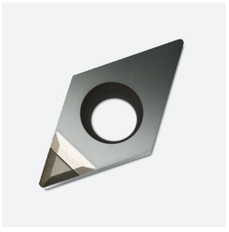
DRIVING YOUR PRODUCTIVITY IN PRECISION PARTS PRODUCTION

Ramp up your productivity and part quality with this leading-edge five-axis Laser solution. Use fewer electrodes and cutting tools and eliminate the need for costly raw materials. Machine your part in just one setup, limit human error and significantly simplify your manufacturing process.

Extreme texturing and engraving quality
Get clean, sharp results and absolutely burr-free texturing and engraving with no post-treatment steps required. Using an ytterbium pulsed fiber Laser in combination with a ultrashort pulsed Laser (femtosecond) you achieve exceptionally high quality.

Innovative texturing
Femotosecond Laser technology opens new possibilities for aesthetic nano textures, including ripple effects and spikes, as well as functional textures.







YOUR VERSATILE SOLUTION

Deliver highly accurate and repeatable results your valued customers expect. This one-of-a-kind Laser engraving, texturing and marking solution combines outstanding quality, efficiency, and femtosecond Laser technology in the smallest possible footprint. It is specifically designed for aesthetic and functional texturing of precision parts for watches and jewelry, small inserts, cutting tools and micro machined work pieces.

Scalable solution
Customize your LASER P 400 series machine to your specific needs, thanks to its scalability. Start with a standard configuration and, as your business evolves, add an axis, a nano or ultra-short pulsed Laser, Automation, and SYSTEM 3R Tooling.

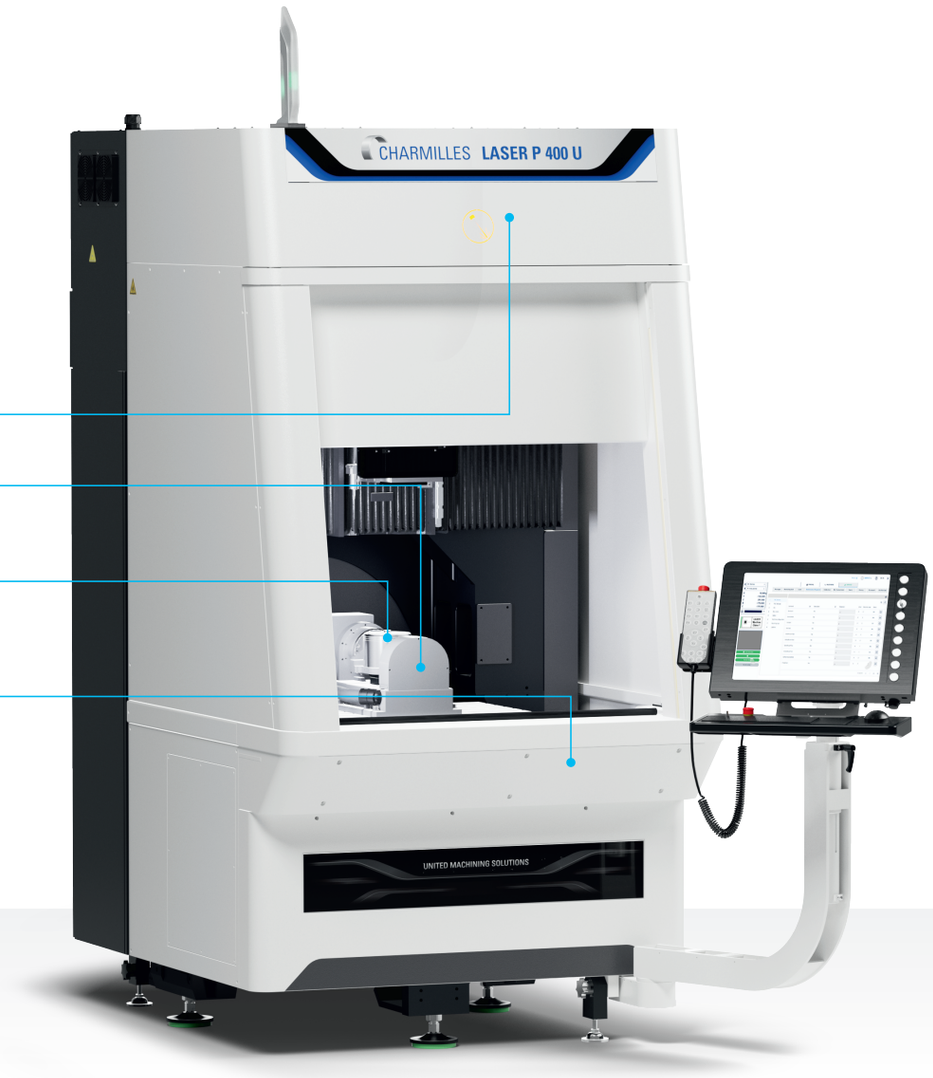
Dual Laser
Combine in live advantages of two lasers (Nano/Femto) into one solution.

Nano and femto
Dual Laser offering more flexibility

Scalable to meet your specific current and future needs

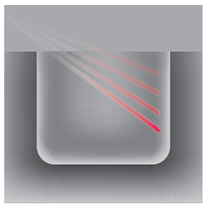
Innovative to open new application horizons with sharp, clean engraving and Nano-level texturing

Ergonomic for user comfort and more productivity per square meter

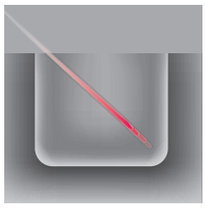


SUCCESS IN ONE SETUP

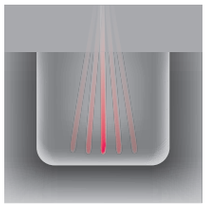
In a single setup, CHARMILLES' leading-edge Laser technology makes it easy for you to machine all of the elements of a bottle cap cavity.



Groove machining
Eliminate the steps required by conventional technologies with five-axis Laser texturing. You do it all in one step.

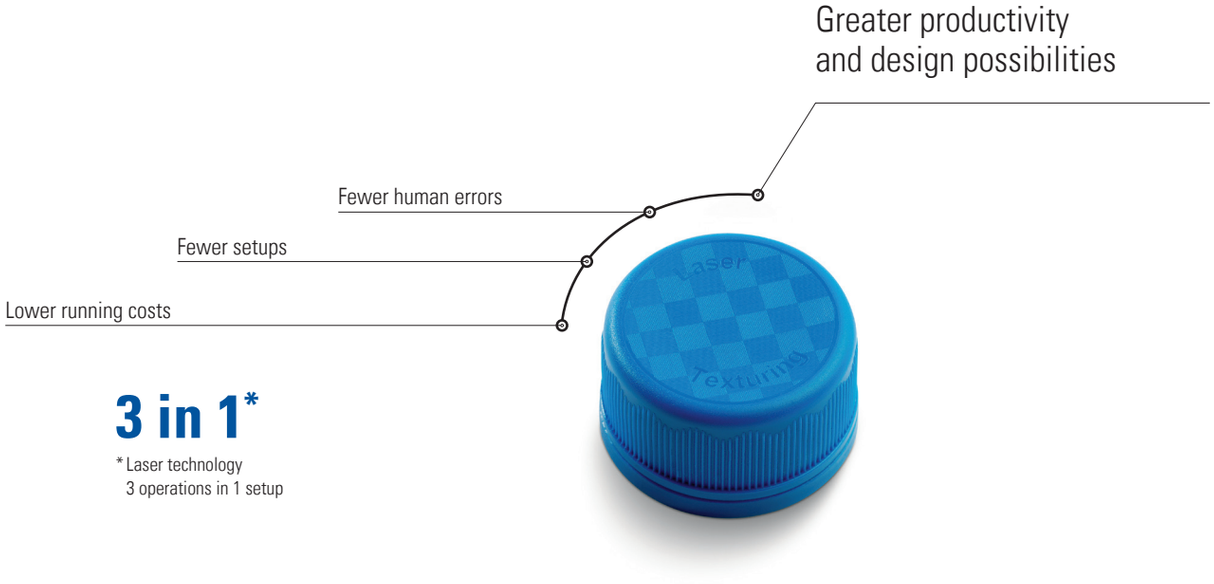


Laser blasting
Achieve outstanding textural homogeneity with fully automated and ready-to-use three- or five-axis Laser blasting.



Logos and special textures
Make your own distinctive mark on your work piece, thanks to the unlimited possibilities offered by our Laser texturing technology.

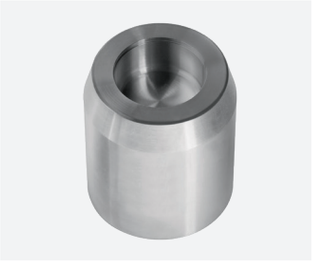




SIMPLIFY YOUR PROCESS AND ACHIEVE INFINITE REPEATABILITY

Limit human error, open new design possibilities and easily texture and engrave your parts, molds and dies — regardless of surface constraints — with our fully digital five-axis process. Fast, accurate and easy surface calculation is built into our Laser solutions to save you time and increase your productivity.

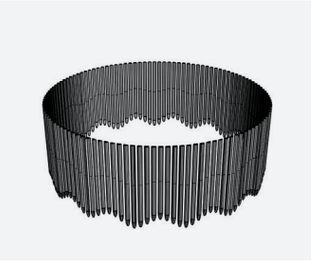
GROOVE MACHINING PROCESS



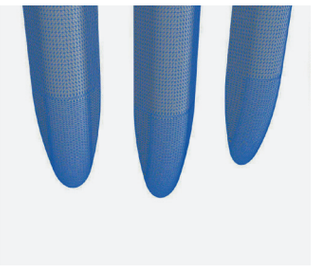
Milled cavity



Surface of engraving



Volume to be engraved



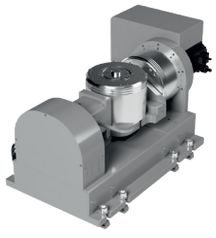
Transformation to mesh



ONE-OF-A-KIND, ALL-IN-ONE DUAL LASER SOLUTION

Choose between a fiber or direct Laser and execute your three- or five-axis applications with full confidence that you have a flexible solution dedicated to your specific needs. Only CHARMILLES positions you to realize the full potential of Laser technology with an all-in-one dual Laser head.





Integrable five axis module



Start
Standard solution

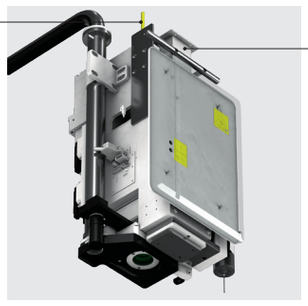
Evolve
Add your integrable solution

Become unique
Get a unique five-axis solution

Versatile Laser solution

Second fiber

Ultra-short pulsed Laser (femto)

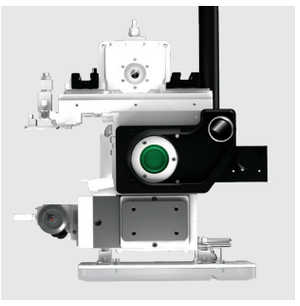


Laser fiber

Standard, all-in-one dual Laser head

Vision system for automatic laser positioning

Renishaw TP1 touch probe

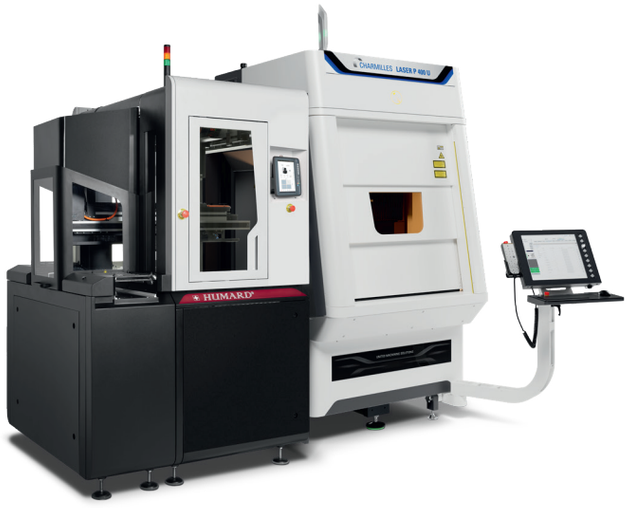


Blowing nozzle

Fast mounting lens holder and exhaust collector

OPTIMIZE YOUR PRODUCTION

Unproductive time is the enemy of productivity. By combining the LASER P 400 (U) with intelligent automation and tooling solutions, manufacturers can maximize machine utilization, reduce idle time, and unlock the full potential of their production capacity.





Complete solution
Humard MR7 / Laser P 400 (U)

Complete solution
SYSTEM 3R WPT1+ / Laser P 400 (U)

Choice of chucks and Tooling

Three-axis SYSTEM 3R
Dynafix 280/GPS 240

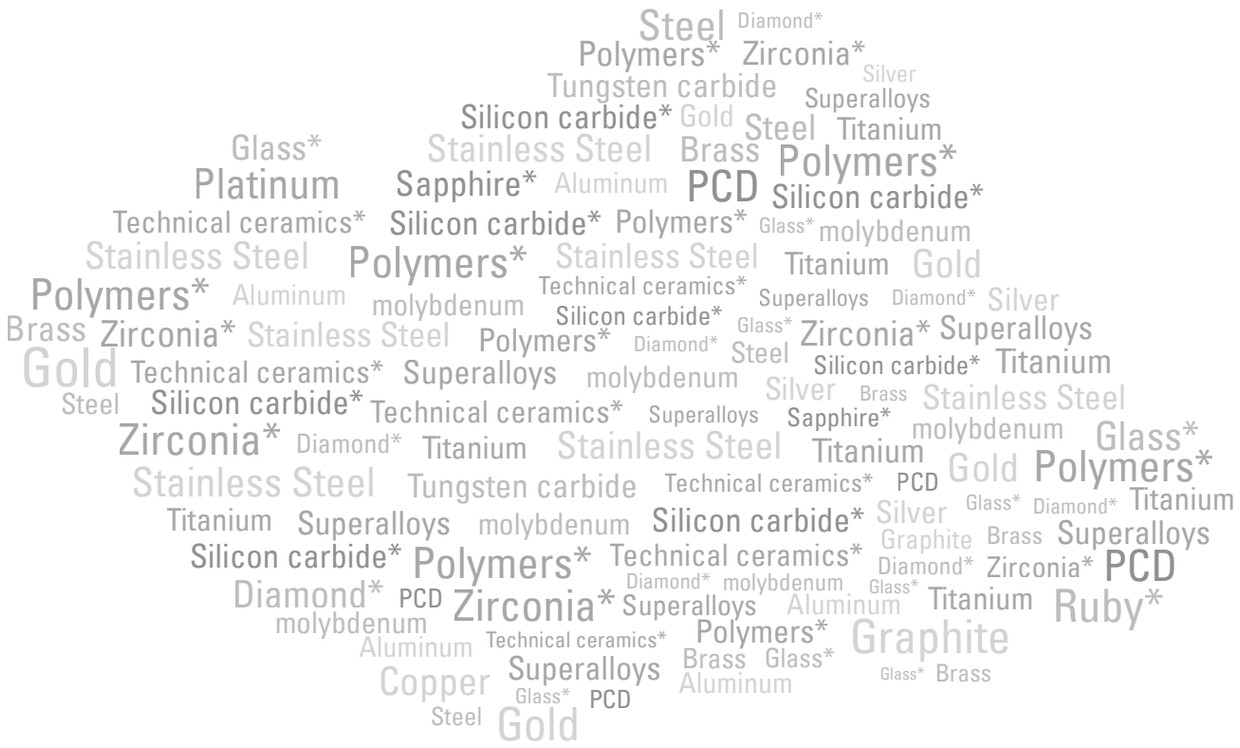
Five-axis manual rotary SYSTEM 3R
Macro 54

Five-axis automatic rotary SYSTEM 3R
Macro 54

UNLIMITED POSSIBILITIES

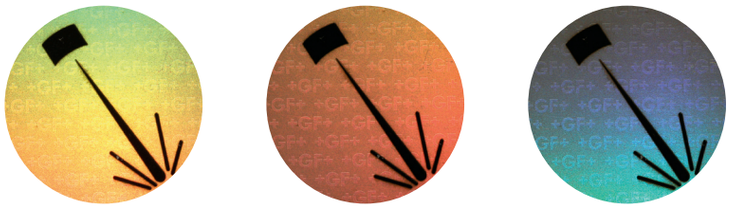
Texture new materials with confidence

As the market reference in surface texturing, we make it easy for you to engrave a wide variety of materials in three or five axes, with or without a femto Laser source: steel, aluminum, carbide, brass, graphite, copper, ceramic and gemstones. With the femto Laser, you can also engrave glass, sapphire and polymers.



* With ultra-short pulsed Laser (femto)

THE FEMTO LASER POSSIBILITIES

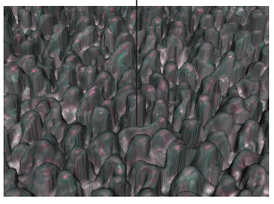


Ripples
New design possibilities with femto laser, colors by light diffraction.

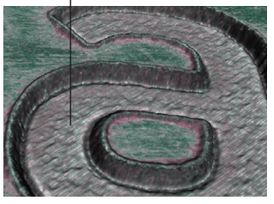




Efficient
Femto second laser allows burr free engravings, limiting Laser post treatment operations



Spikes
New capability with femto laser, deep blacks texture (light trapping)



Standard and cost effective fiber laser solution (Nano second)

CUSTOMER CARE

Our Customer Care experts deliver end-to-end support with proactive expertise, digital tools, and hands-on service to ensure your machines perform at their best throughout their life cycle.



Secure your sustainable machining success
A huge network of highly-trained experts delivering preventive maintenance and advanced support

Grow your people skills
Performance oriented training academy with a human-centric and hands-on approach of knowledge transfer

Realize the full potential of your equipment
Advanced diagnostics, certification, upgrades, training, and financial solutions

My rConnect

My rConnect

One portal to maximize your production performance — anytime, anywhere.
My rConnect is your central service platform for managing your machines from a single place. Standard features include secure connectivity and remote access to machines, helping to minimize production downtime. Optimize your responsiveness in production with real-time monitoring and instant notifications.



SUCCESS PACKS: TAILORED SERVICE SOLUTIONS FOR EVERY NEED

Success Packs are three annual subscription levels designed to support your machines throughout their life cycle. Whether you aim to reduce downtime, prevent issues, or avoid unexpected repair costs, there's a plan to match your needs.

BRONZE

For full responsiveness
Fast reply services to ensure machines are swiftly back up and running

SILVER

For peak performance
Periodic maintenance services to keep your machines in optimal condition

GOLD

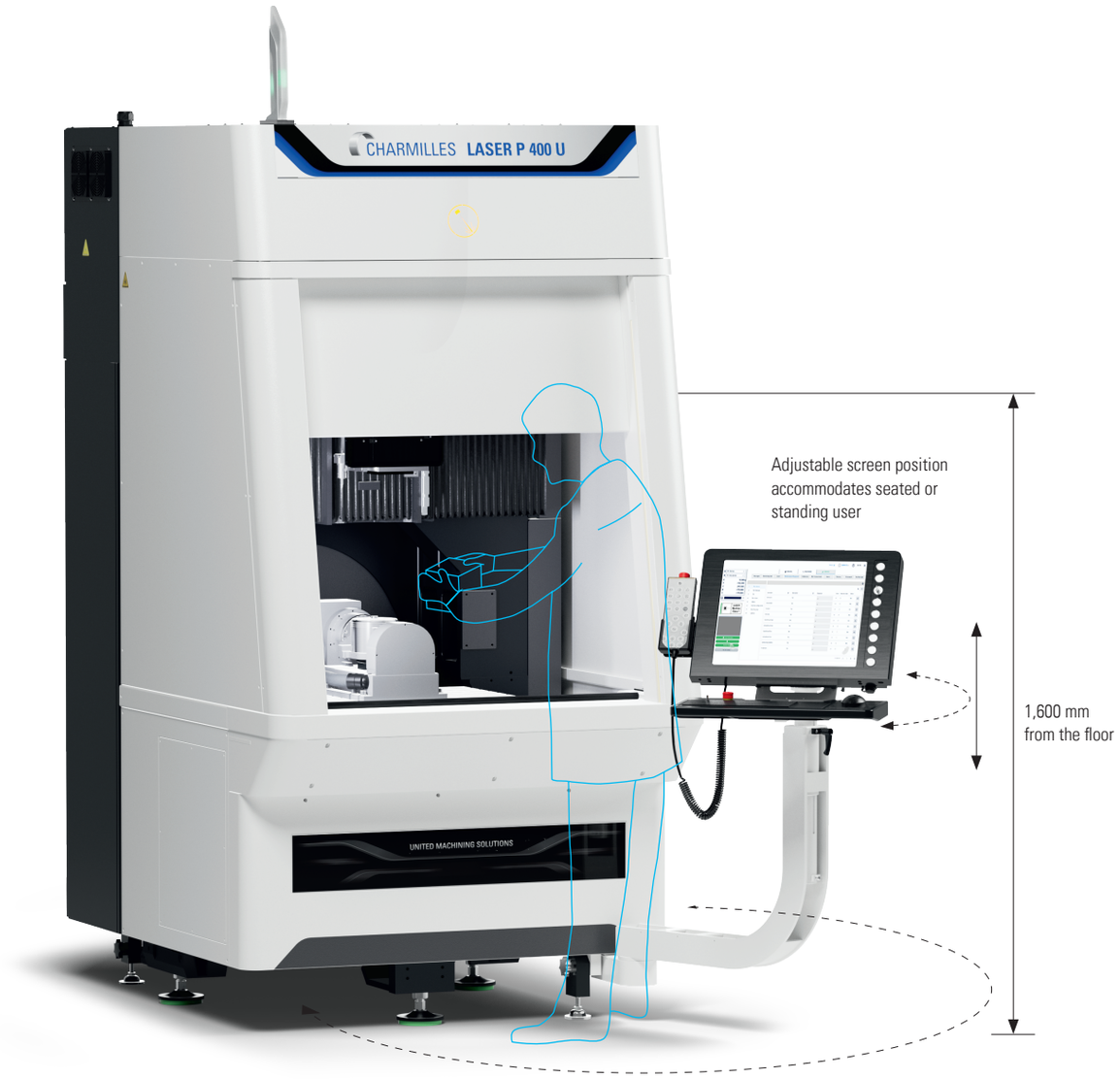
For guaranteed peace of mind
Extended warranty coverage to mitigate financial risks and focus on your core business



CHOOSE YOUR PACK

	BRONZE	SILVER	GOLD
Speedy Access Fast track for support via My rConnect	✓	✓	✓
Extended Remote Support 24/5 expert support via My rConnect	✓	✓	✓
Machine Live Data Real-time machine insights via My rConnect	✓	✓	✓
Certified Preventive Maintenance Annual machine service performed under UNITED MACHINING standards		✓	✓
Core Components Diagnosis Annual checkup on the core machine components		✓	✓
Discounts Preferred prices for parts and labor		✓	✓
Extended Warranty For up to five years			✓

BEST ERGONOMIC SOLUTION FOR YOUR EASE OF USE



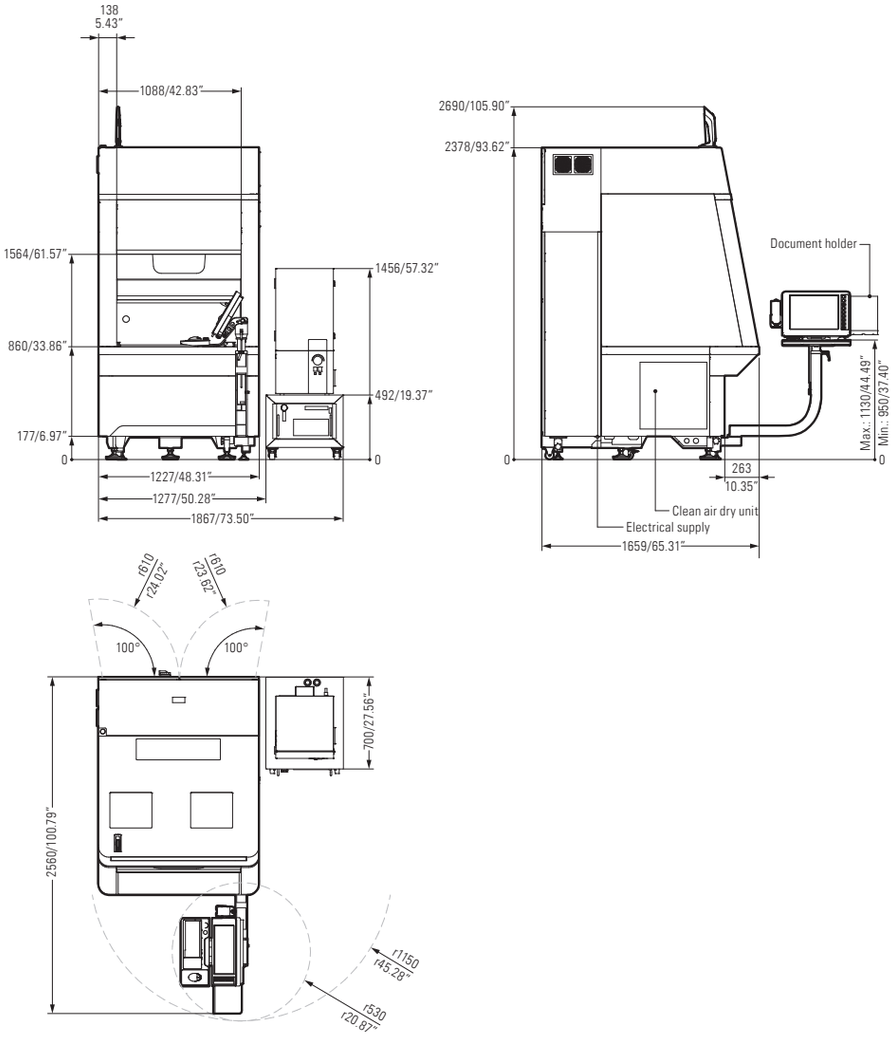
Comfortable utilization
Doors open for easy loading and optimal workpiece access.
Doors closed: the large window provides an excellent view inside the machine for process monitoring.

TECHNICAL SPECIFICATIONS

LASER P 400 (U)

Dimension of complete equipment *	1227 x 1659 x 2690 mm (48.31 x 65.31 x 105.90 in)
Machine weight (machine only)	2600 kg (5,732 lbs)
Floor space (machine only)	2.04 m^2 (21.96 ft^2)
Maximum workpiece dimensions 3Ax/5Ax	Depends on the lens type – contact your CHARMILLES sales specialist
Maximum workpiece weight 3Ax/5Ax	50 kg/4 kg (110.23 lbs/8.82 lbs)
Table size	700 x 400 mm (27.56 x 15.75 in)
Travel X/Y/Z	600 x 400 x 300 mm (23.62 x 15.75 x 11.81 in)
Rotary 4/5 axis **	A 220°/B 720°
Laser sources	Multi-Laser sources: nanosecond and/or ultrashort pulsed laser **

* Width x depth x height ** Option



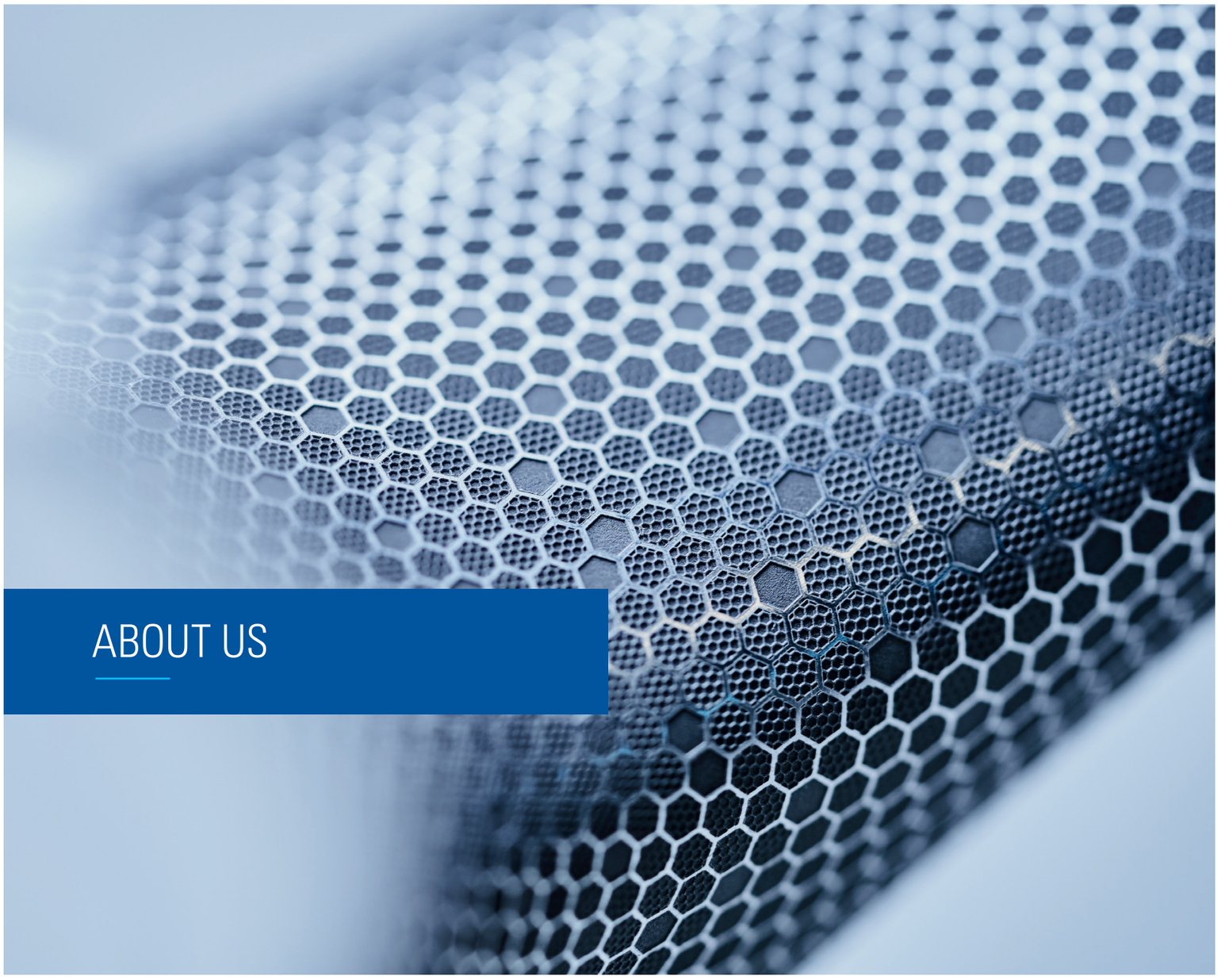
CHARMILLES

CHARMILLES stands for excellence in laser technology and builds on 25 years of expertise from AF Laser and Microlution. As a global leader in surface texturing and micromachining, CHARMILLES provides advanced nano- and femtosecond laser machine systems that meet the most demanding manufacturing requirements.

Year of birth of 5-axis laser texturing 2001
Head office Geneva, Switzerland

CHARMILLES offers the industry's most complete range of laser texturing and micromachining platforms, designed for precision and high-accuracy features. Laser texturing platforms handle graining, blasting, marking, coloring and decorative or functional finishing operations—even on complex 3D geometries.

Micromachining platforms deliver precise micro-cutting, drilling, shaping and engraving operations on the hardest material. All the CHARMILLES laser platforms are supported by our dedicated CAD/CAM software, LaserSUITE360, for full process control.



ABOUT US

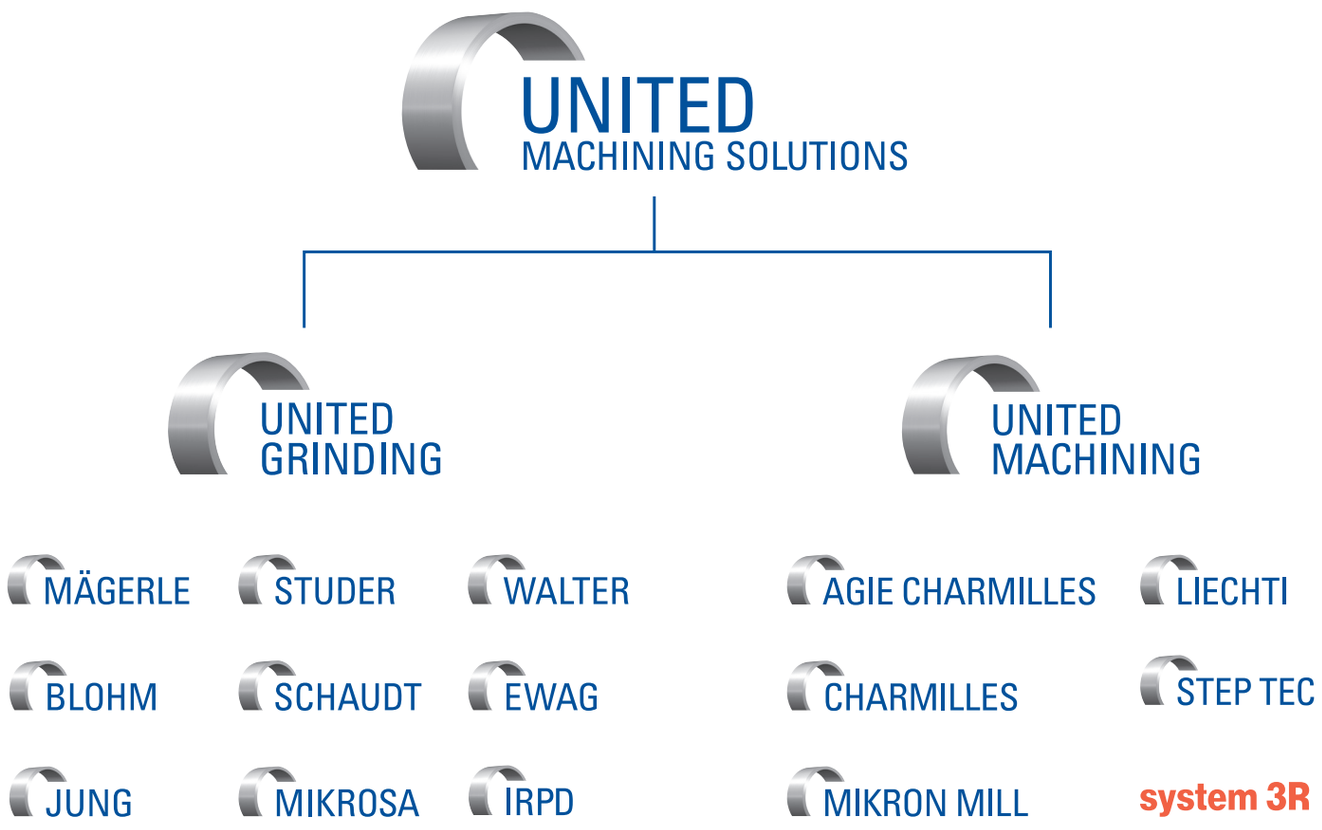
UNITED MACHINING SOLUTIONS

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»



CHARMILLES

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