

CUT S

400 / 600 / 800

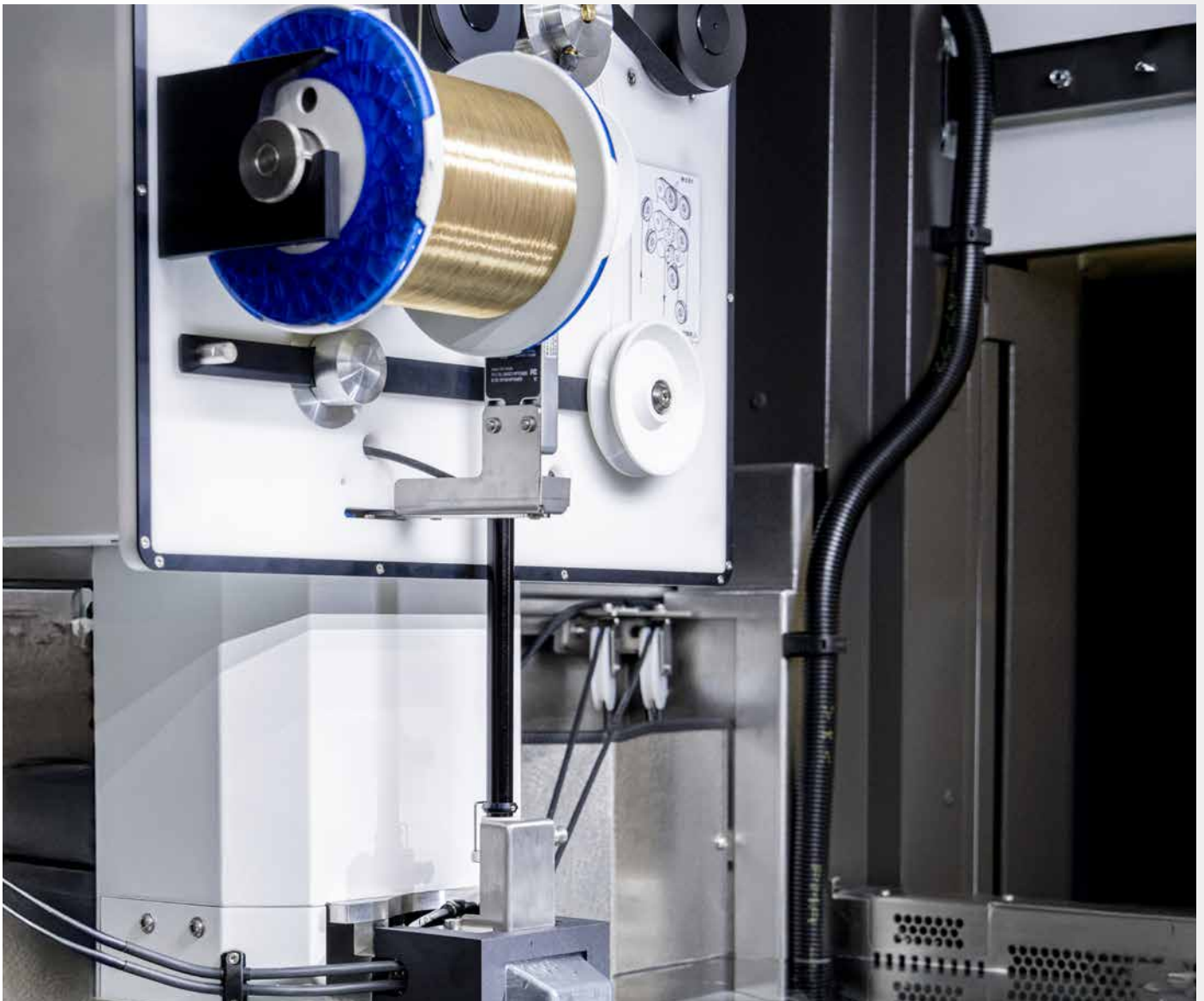


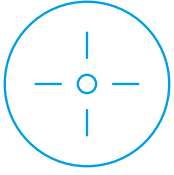
 **AGIE CHARMILLES**

A member of UNITED MACHINING SOLUTIONS

SUPERIOR PRECISION REDEFINED

Achieve unparalleled accuracy and efficiency with our new, standard-setting, superior precision CUT S 400/600/800 wire-cutting Electrical Discharge Machining (EDM) series. These machines are designed to deliver exceptional performance, reduce operational costs, and enhance productivity in high-precision manufacturing.





Built to be precise

Achieve stable pitch accuracy on both micro and large parts with our Intelligent Power Generator featuring Direct Power Supply (IPG-DPS), Thermocompensation, symmetrical mechanical design, and an advanced axis measurement system.



Designed for operators

Easily attain ultraprecise results, thanks to our intuitive interface UNIQUA, dynamic and ISO programming, new high-precision anti-collision system, real-time monitoring, and Spark Track technology featuring the Intelligent Spark Protection System (ISPS) module and sustainable iWire process.



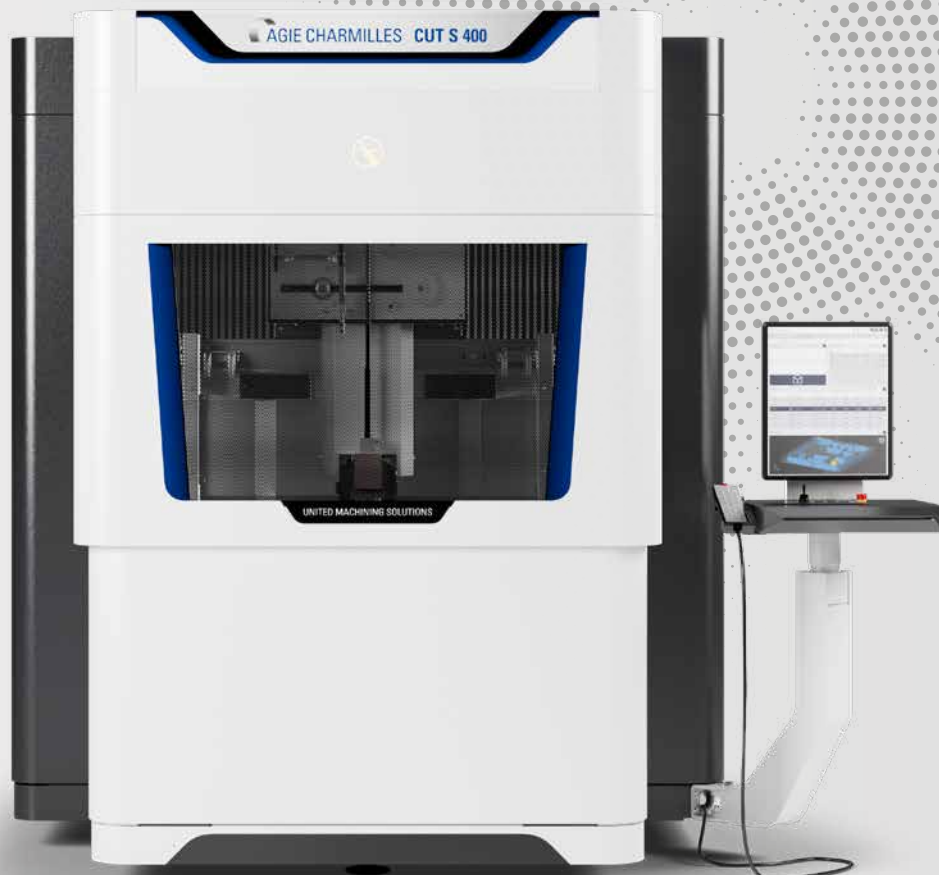
Taper machining without limits

Position your team for limitless taper machining. Our new TETRAX mechanical design with full U, V, and Z axis travel vastly expands your taper machining capabilities.



Ready to automate

Right out of the box, you're ready for automation due to our symmetrical TETRAX mechanical design allowing two-sided access to the table and left or right configurability for maintenance-related accessibility. Compactness optimizes the machine's footprint.



ADVANCE DESIGN, STRONG PERFORMANCE

TETRAX design for unlimited taper machining

The new TETRAX mechanical design brings full U and V axis travel into play, giving you limitless taper machining capability and the flexibility to machine complex parts with high precision over the long term – no recalibration required.

Symmetry in motion: boosting accessibility & automation

The symmetrical machine architecture enhances operator accessibility and reduces idle time, while enabling seamless integration of modular automation systems from any side of the machine.

Full Z-axis travel ramps up your flexibility

Tackle even complex geometries with this machine's full Z-axis travel – another success-triggering TETRAX design feature – setting you free to machine tapers without height limitations.

Precision you can feel: linear glass scales in all axes

Designed for uncompromising accuracy, these high-resolution scales deliver real-time positional feedback, ensuring micron-level precision throughout the machining process.



SMART CUTTING AND INTELLIGENT PROCESS CONTROL

Controlled sparks for superior precision

Next-level cutting productivity is driven by our high-speed Intelligent Power Generator with Direct Power Supply (IPG-DPS), which automatically adjusts parameters during main and trim cut for optimal performance. It ensures precise gap control, accurate geometry, smooth surfaces, no wire breakage, and fast cutting speeds.

Spark Track technology to drive quality, uptime

Profit from consistent quality and reduced downtime with Spark Track technology's ISPS and iWire modules, enabling adaptive spark control and stable energy delivery while preventing wire breakage and safe wire consumption.



SMART CUTTING AND INTELLIGENT PROCESS CONTROL

Access technologies to drive your success

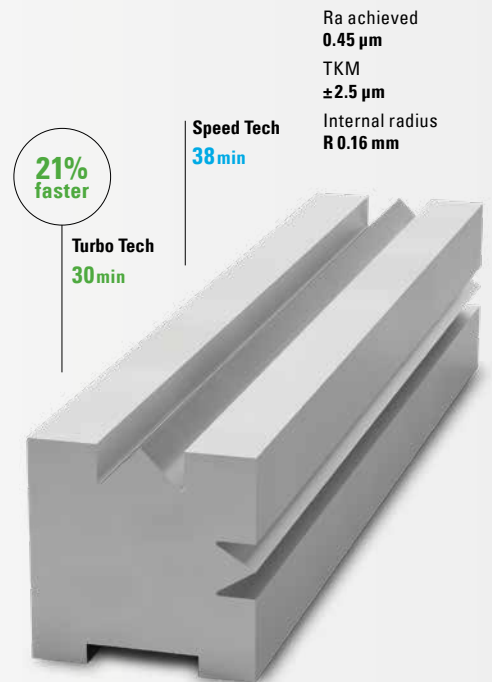
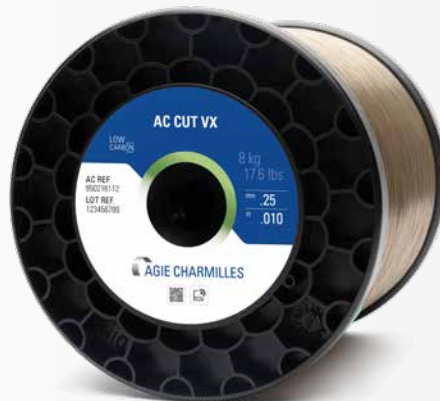
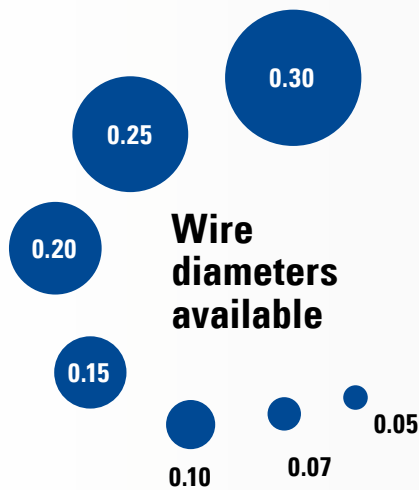
Improve your machining efficiency and reduce your costs with the CUT S 400/600/800 machines' database of more than 600 available technologies available and limitless user technologies.

Wide wire selection to boost your productivity

Extract the most of your CUT S 400/600/800 machining performance and productivity. Whether you seek precision, speed, productivity, cost efficiency or satisfying special industry needs, find what suits you best among our more than 55 plug-and-play wires.

Turbo Tech for faster machining, higher throughput

Achieving high-speed erosion on tight-tolerance applications is a snap with our Turbo Tech technologies. Turbo Tech works with ISPS and iWire ensure process stability and reduce wire consumption even during high-speed operations.



Wire diameters and materials available

For more details on wire compatibility with your application material, check the technology database.

PRECISION PERFECTED – SAFE, STABLE, AND THERMALLY CONTROLLED

Precision you can trust Even when mistakes happen

Our patented high-precision collision protection system safeguards machine accuracy by actively preventing misalignment and component damage during unintended contact.

Reliable precision in any environment

The thermal compensation system actively adjusts for temperature-induced changes in material dimensions, ensuring the machine maintains precise geometry and alignment—even under fluctuating thermal conditions and during continuous operation over hours or days.

Rigid monobloc table Built as one for accuracy

Engineered for performance, it delivers precise results under load, ensures quality with heavy parts, offers flexible fixturing and adapts to diverse setups for greater versatility.

Closed cabinet for thermal consistency

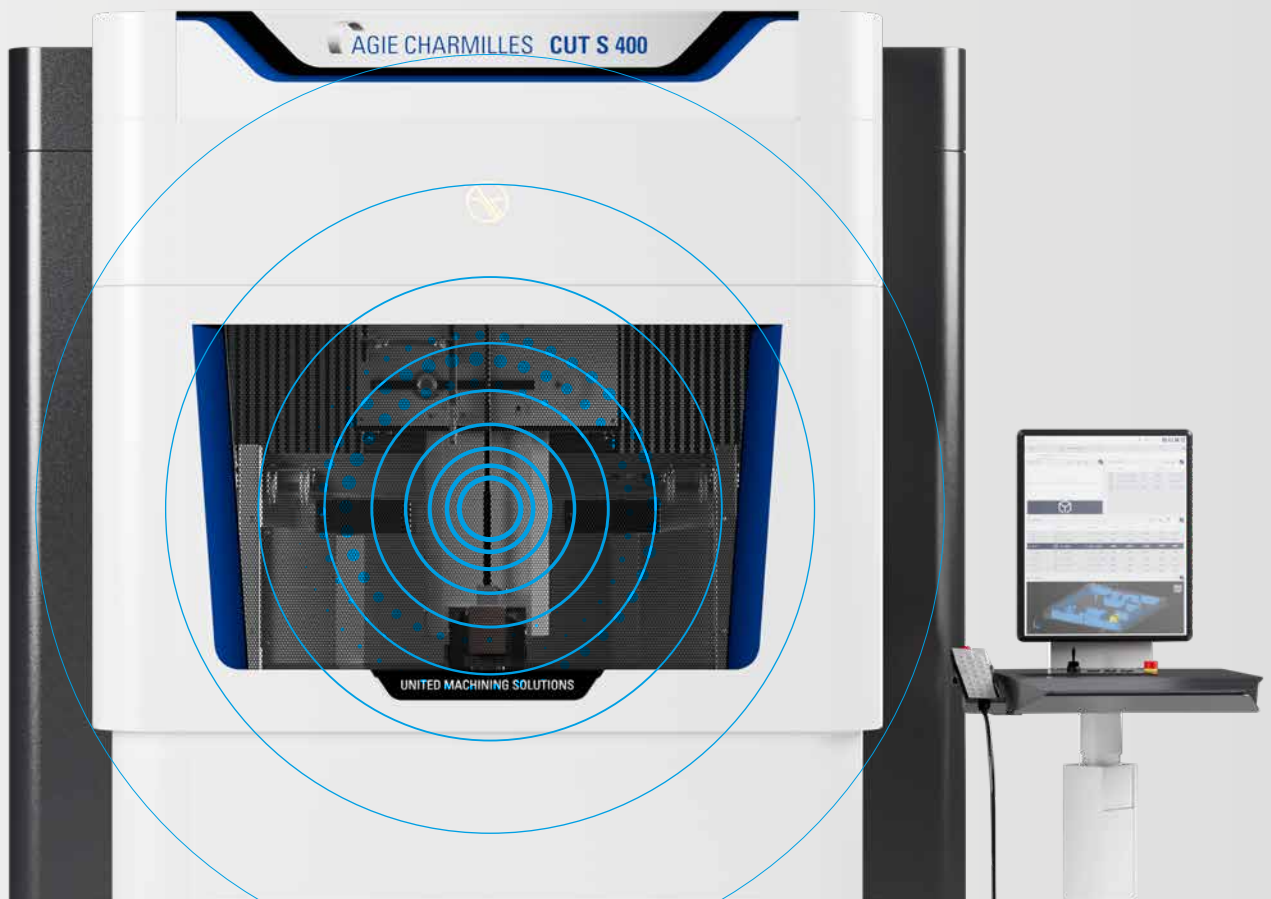
The water-cooled, fully sealed electrical cabinet with optimized airflow ensures thermal consistency and protects electronics from dust and dirt. Thanks to the enclosed machine design, mechanical drift caused by external influences is prevented, ensuring high accuracy and repeatability. Furthermore, the enclosure protects both the operator and the surrounding environment from electromagnetic emissions.



Thermal compensation



Collision protection system



FAST-TRACK WIRE SETUP RIGHT WHERE YOU NEED IT

Streamlined front-end wire installation

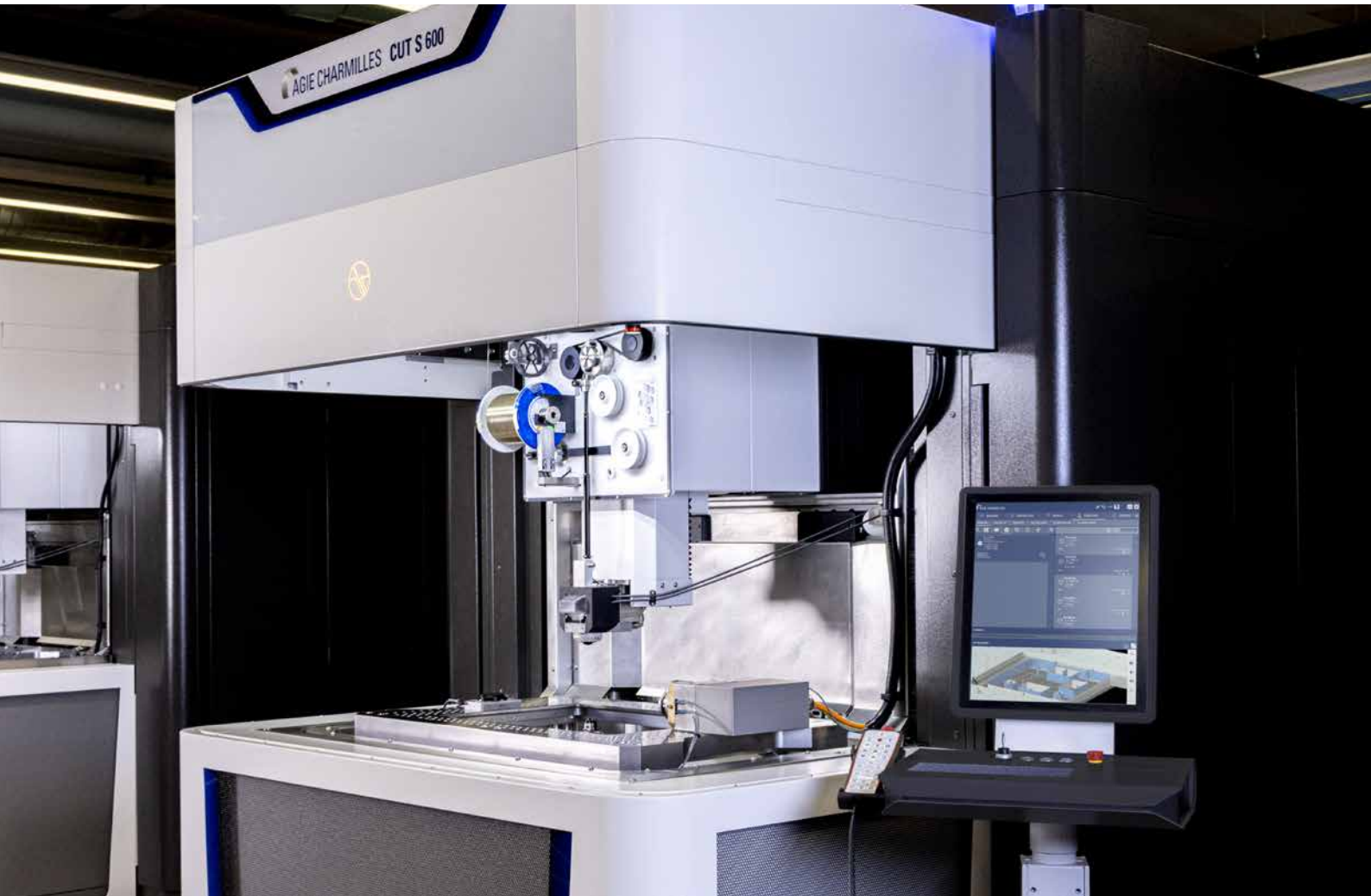
A clean system is a big benefit of our intuitive wire setup: your operator will experience faster maintenance and less downtime, thanks to free axes accessibility and a clear view of the machining area.

Big spool for increased uptime

Your operator will spend less time changing wire spools and more time machining, thanks to our big, 25 kg wire spools. Longer unattended machining, increased autonomy and productivity are in your wheelhouse with our big wire spools.

Smart Wire, smarter workflow

Smart Wire spools are embedded with RFID chips that store essential wire data and enable communication between the wire and the machine. Smart Wires enable automatic wire recognition, wire length checks and job traceability.





UNIQUA FAST, INTUITIVE, HUMAN-CENTERED CONTROL

Program freely, integrate easily

A proven, future-ready control system powering over 1,500 machines worldwide. Equipped with advanced VISION capabilities and an intuitive HMI2 interface, it supports both standard ISO programming and dynamic programming via UNIQUA. This dual approach offers exceptional flexibility to meet diverse user preferences and application requirements. Seamless integration into existing workflows enhances operational efficiency and significantly reduces setup time.

Cut smart, finish fast with Dynamic Corner Control

Dynamic Corner Control optimizes corner accuracy, maintains cutting speed through radii, and improves part quality while reducing the need for post-processing – ultimately improving overall efficiency and production throughput

EDM-EXPERT: your onboard authority

Say goodbye to guesswork, with our EDM-EXPERT and its material database optimizing generator settings for various materials, heights and wires. Machine tapers with confidence and experience increased uptime: it ensures optimal performance across materials.



EASY TO MAINTAIN SIMPLE TO SERVICE

Simplified heads maintenance, top to bottom

Our innovative screw fixation system simplifies both lower and upper head maintenance, making it faster, easier, and more intuitive than ever. Say goodbye to complex procedures and hello to streamlined servicing that saves valuable time and reduces operational costs. With less downtime and fewer maintenance demands, your team can stay focused on what matters most – delivering precision and productivity at every turn.

Filtration that works for you

Minimize maintenance and maximize autonomy. Our filtration system features easy-to-change synthetic filters that deliver top-tier performance – so your operator spends less time, with less effort, keeping things running smoothly.

Grease smarter, run longer

Our centralized automatic greasing system takes the hassle out of maintenance by continuously lubricating key components – so you don't have to. By reducing manual intervention, it not only cuts down on maintenance time and effort but also extends machine uptime and reliability.

ENGINEERED FOR AUTOMATION

Automation ready by design

Step confidently into automated production with our TETRAX symmetrical design – built to accelerate your journey from manual to automated workflows. With dual-sided table access, flexible left/right maintenance configuration, and a space-saving compact footprint, this machine is engineered for seamless integration and scalable efficiency. Start strong today and stay ahead in tomorrow's automated landscape.

Access made easy, flexibility built in

Enjoy effortless access and unmatched flexibility with a top-loading system, movable roof, and a console that adapts to your workspace—left or right—based on your specific needs

Big spool, bigger autonomy

Unlock seamless, uninterrupted operations with our large-capacity spool – engineered to extend machine autonomy and supercharge your workflow. By reducing manual interventions and enabling advanced automation, it keeps your production line running smoothly and efficiently.

Probe with confidence, machine with precision

Ensure flawless setup and machining accuracy with the Renishaw mechanical touch probe. Designed to measure workpiece planarity and positioning directly on the machine's worktable, this high-precision tool streamlines your workflow, reduces setup time, and enhances overall machining reliability.





INFINITE TAPER MACHINING UNRESTRICTED ANGLES, UNLIMITED POSSIBILITIES

Freedom to machine any taper

Exploiting full, symmetrical U and V axis travel, our new TETRAX design puts you in the driver's seat when it comes to high-precision machining of tapers. Unleash your ability to tackle complex parts and discover long-term precision without recalibration..

Machine tapers without height limits

Machining the most complex geometries becomes child's play, thanks to this machine range's full Z-axis travel brought to life by the TETRAX design. Experience unrestricted machine tapering with no height limitations."

**Tap into an extensive technology database**

Achieve advanced taper machining efficiency and cost reduction through access to a comprehensive, proven technology and wire database dedicated to conical machining with the CUT S 400/600/800 series.

Closed diamond guides, your key to perfect cuts

Boost cutting quality, ensure smooth threading, and minimize wire breakage – all while expanding your machining capabilities. Our advanced heads with closed diamond wire guides deliver precise control on cylindrical and conical cuts, backed by stable dielectric injection.



GREATER VERSATILITY FROM THE START

Symmetrical design, total automation

With our symmetrical TETRAX mechanical design, you'll be automation-ready from the start. The machine's two-sided table access, left or right configurability for maintenance access, and footprint-optimizing compactness put you on the fast track to success today – and in an automated future.

Connect, integrate, optimize

With OPC UA connectivity, gain standardized access to machine data, KPIs, and logs –empowering seamless integration into smart factories and accelerating your journey toward a fully connected digital ecosystem.

From manual to automated workflow

The Automatic Slug Welding streamlines core-to-cavity bonding with reverse erosion, enabling fast manual removal and reducing processing time by up to 10% and manual effort by up to 90%. This feature supports 100% automation, eliminates the need for day/night strategies, and accelerates production with minimal intervention.



**Hands-free threading,
full-speed automation**

The Automatic Wire Threading (AWT) delivers reliable, hands-free wire threading and rethreading – even under challenging conditions – enabling fully unattended operation, efficient multi-opening cuts in die blocks, and seamless automation integration..

**Cut clean,
work seamless**

The integrated wire chopper offers an optional solution for clean, automated wire disposal – boosting production autonomy, minimizing downtime, and keeping your workflow efficient and uninterrupted.

ACCURACY AT ANY SCALE

Unmatched precision

Independent of workpiece size

The CUT S 800 redefines large-part machining with ultra-high accuracy. Its advanced QUADRAX mechanical architecture keeps the workpiece stationary, maintains constant axis mass, and enables independent axis movement – ensuring consistent precision, regardless of part size.

Precision starts at the core

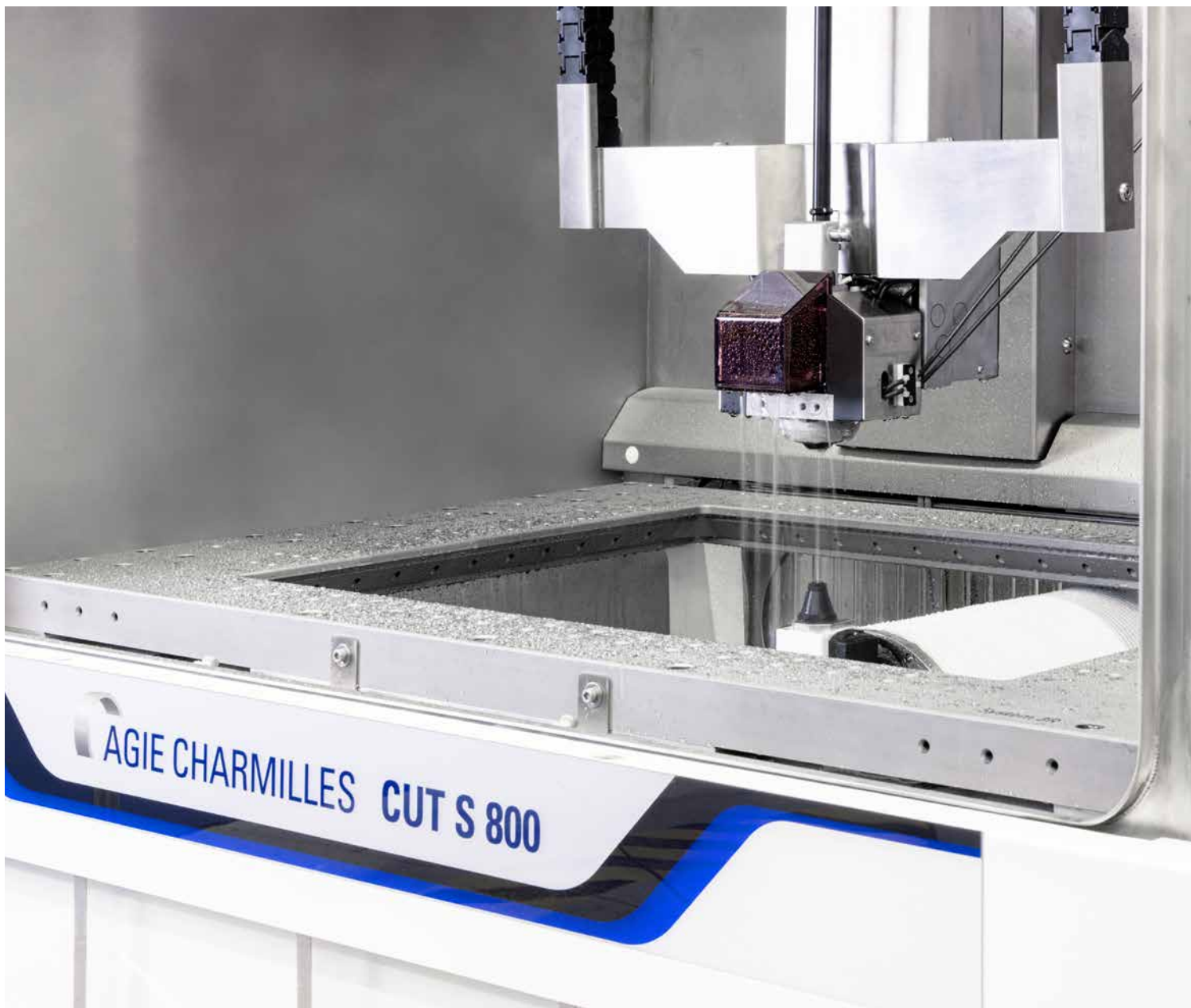
A mineral cast base ensures low thermal conductivity and superior vibration damping. Combined with active thermal stabilization and high-resolution calibration of key components, this foundation guarantees long-term accuracy and reliability – cut after cut.

Extended stroke, exceptional results

With its expanded axis travel, the CUT S 800 unlocks new possibilities for machining large, high-precision components – delivering uncompromised performance and unmatched flexibility.

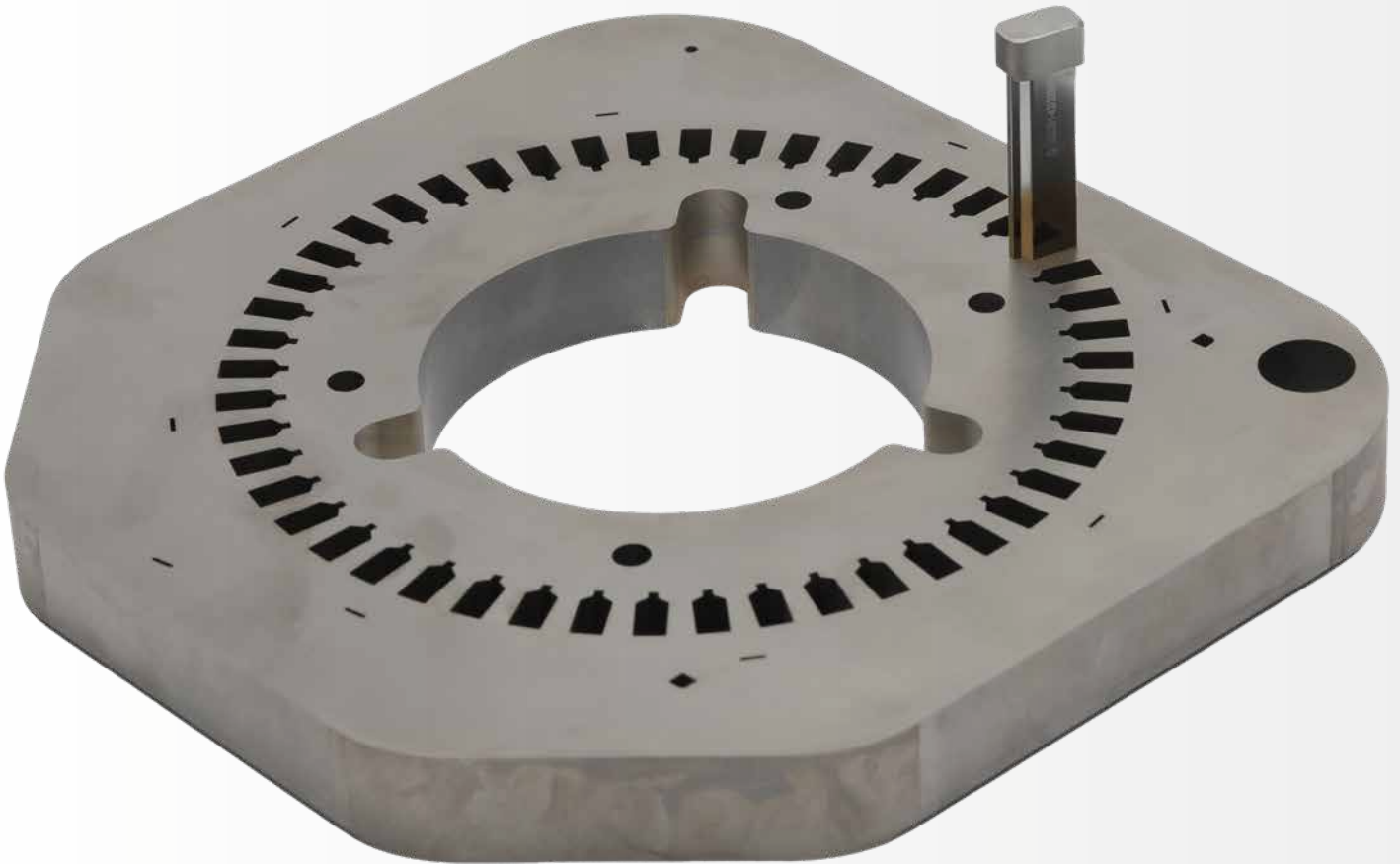
Mastering the finest details

Achieve exceptional accuracy in inner radii and intricate geometries. The CUT S 800 enables fully automated machining with wire diameters as small as 0.1 mm – powered by the industry's most reliable wire system, featuring automatic threading and rethreading.





OVERVIEW OF THE DIFFERENT APPLICATIONS MADE WITH CUT S SERIES



Your benefits

- Highest pitch accuracy / circularity
- Perfect profile accuracy on all contours
- Avoid polishing and reduce Jig grinding process

Applied technologies

- AGIE CHARMILLES CUT S 400/600
- Advanced accuracy
- Fine wire

PERFORMANCE RESULTS

Market segment	Automotive: Electric and hybrid vehicles
Part name	V motor stamping
Part material	Carbide
Surface finish	Ra < 0.1 µm
Wire	AC Cut AH

OVERVIEW OF THE DIFFERENT APPLICATIONS MADE WITH CUT S SERIES



Your benefits

- Wire contamination free
- Safer manufacturing process
- Productivity

Applied technologies

- AGIE CHARMILLES CUT S 400/600
- Rotary axis
- ISPS
- iWire

PERFORMANCE RESULTS

Market segment	Medical
Part name	Surgical clamps
Part material	316 Stainless Steel Titanium
Surface finish	Ra < 0.2 µm
Wire	AC Cut ZeroCu

SERVICE + SUCCESS

Our Service + Success 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

Digital services for all your UNITED MACHINING machines, anytime, anywhere

My rConnect is your gateway to advanced digital assistance. Enjoy simple navigation and direct access to UNITED MACHINING support, for all connected and unconnected machines, regardless of their age.

Free standard features

- Asset overview
- Service case management
- Conferencing and communication
- Machine documentation

On-demand features

- Remote access
- Live data



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



Speedy access

Fast track for support



Extended remote support

24/5 expert support through 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



TECHNICAL SPECIFICATIONS

MACHINE	CUT S 400	CUT S 600	CUT S 800
Dimensions (mm)	2060 x 2981 x 2345	2200 x 3500 x 2490	2560 x 3100 x 2950
Dimensions (in)	81.1 x 114.96 x 92.33	86.61 x 137.8 x 98.03	105.2 x 122.1 x 116.15
Weight (kg/lbs) without dielectric	4500/9920	5300/11685	6300/13889

WORK AREA

Part Dimensions (mm)	800x600x250	1000x700x350	1350x1000x510
Part Dimensions (in)	31.5 x 23.62 x 9.84	39.37 x 27.56 x 13.78	53.15 x 39.37 x 20.08
Max Part Weight (kg/lbs)	1000 / 2204	1500/2205	3000/6613
Dielectric Level (mm/in)	0-295/11.6	0-395/14.01	0-520/20.47

AIR SUPPLY

Air Pressure (bar)	6	6	6
Air Flow (l/min)	250	250	150

AXES

Axes Travel XYZ (mm)	405 x 315 x 256	605 x 405 x 356	800 x 600 x 510
Axes Travel XYZ (in)	15.94 x 12.4 x 10.07	23.62 x 15.75 x 13.78	31.5 x 23.62 x 20.08
U,V Travel (mm)	500 x 350	700 x 450	800 x 600
U,V Travel (in)	19.68 x 13.78	27.56 x 17.71	31.5 x 23.62
Taper Angle/Height (°/mm/in)	±30/256 ±30/10.07 (45° optional)	±30/356 ±30/13.78 (45° optional)	±30/510 ±30/20.08 (45° optional)
Movement Resolution (µm/µ-inch)	0.1/0.004	0.1/0.004	0.1/0.004
Axis Speed (m/min/in/min)	3/118	3/118	3/118
Linear scale	X, Y, Z, U, V	X, Y, Z, U, V	X, Y, Z, U, V
Anti collision protection	X, Y, Z, U, V	X, Y, Z, U, V	X, Y, Z, U, V

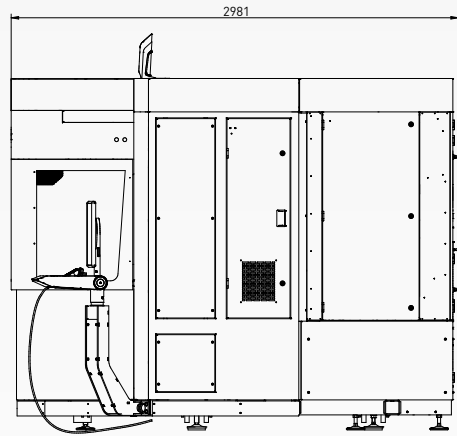
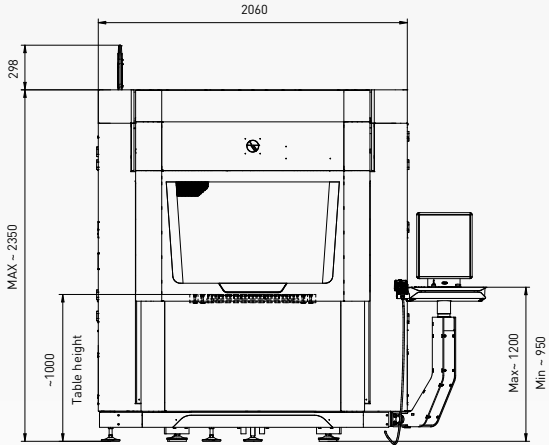
DIELECTRIC

Dielectric Type	Deionised water	Deionised water	Deionised water
Total volume of dielectric (l)	1240	1550	2000
Synthetic Filtering Cartridges	2 (Optional 4)	2 (Optional 4)	4
Tank level regulation	Full automatic	Full automatic	Full automatic

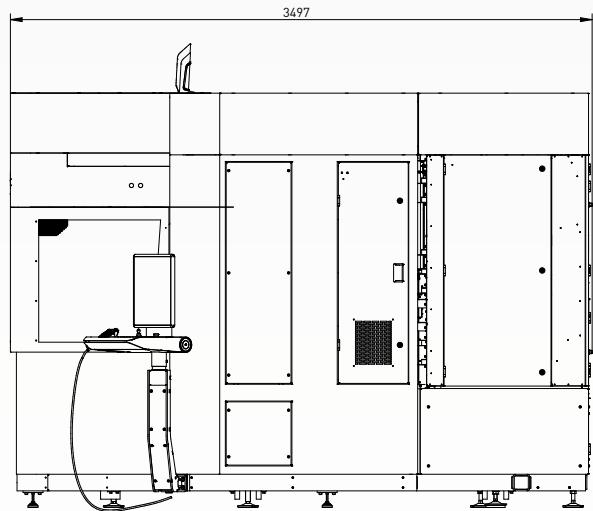
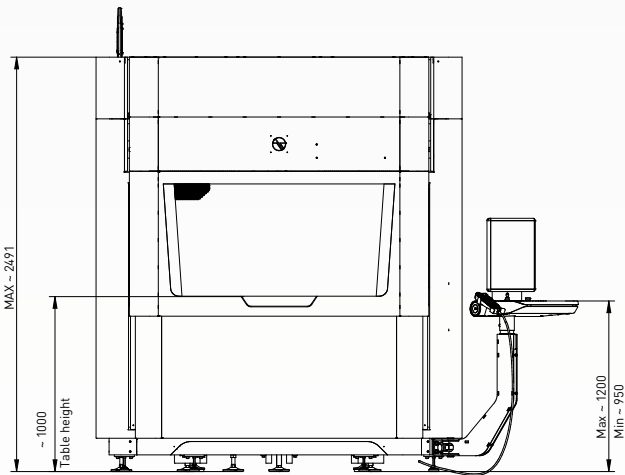
WIRE

Wire Guide (mm/in) (Standard)	Ø0.20 or 0.25 / 0.008 or 0.0100	Ø0.20 or 0.25 / 0.008 or 0.0100	Ø0.20 or 0.25 / 0.008 or 0.0100
Wire Guides (mm/in) (Optional)	Ø0.05 - 0.3/ 0.002 - 0.012	Ø0.05 - 0.3/ 0.002 - 0.012	Ø0.1 - 0.3/ 0.004 - 0.012
Automatic Threading (mm/in)	Ø0.05 - 0.3/ 0.002 - 0.012	Ø0.05 - 0.3/ 0.002 - 0.012	Ø0.1 - 0.3/ 0.004 - 0.012
Reel Weight	8kg (25kg optional)	8kg (25kg optional)	8kg (25kg optional)
Best Ra (µm)	0.08	0.08	0.08

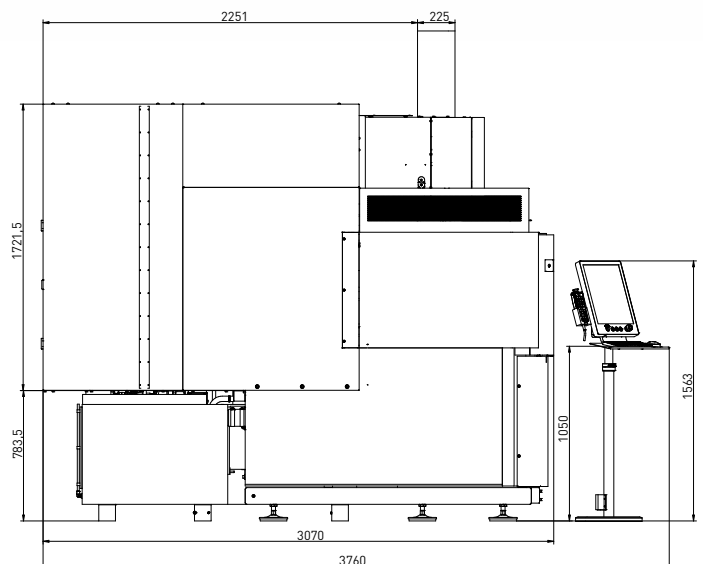
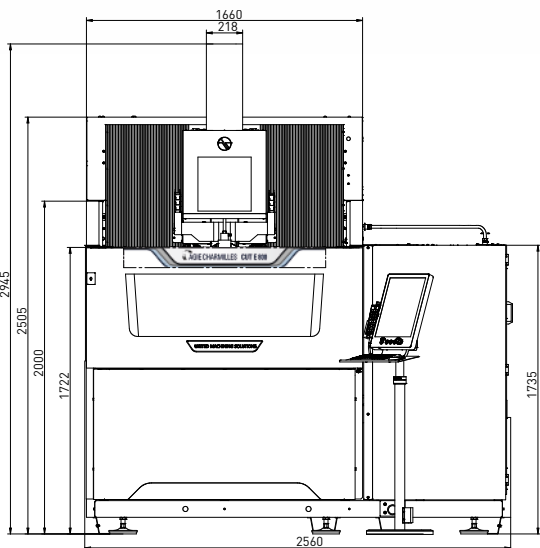
CUT S 400



CUT S 600



CUT S 800



AGIE CHARMILLES

AGIE CHARMILLES, inventor of industrial EDM, is known as a premium brand and innovation leader in Wire, Die-Sinking, and Hole-Drilling EDM. Our automation-ready solutions serve mold making and high-end part production—delivering Swiss precision, reliability, and performance.

Year of foundation 1954
Head office Losone , Switzerland

AGIE CHARMILLES's product portfolio includes wire-cutting, die-sinking, hole-drilling EDM solutions as well as fully customized solutions for specific applications like aerospace.

By integrating the latest technological advancements (Intelligent Power Generator, Intelligent Spark Protection System, iWire, and FORM eCAM), AGIE CHARMILLES machines deliver high-precision cutting performances, extreme accuracy, and nano-level surface finish. Our EDM solutions are renowned for their speed, precision, and energy efficiency, catering to diverse machining needs beyond Mold & Die applications.



ABOUT US

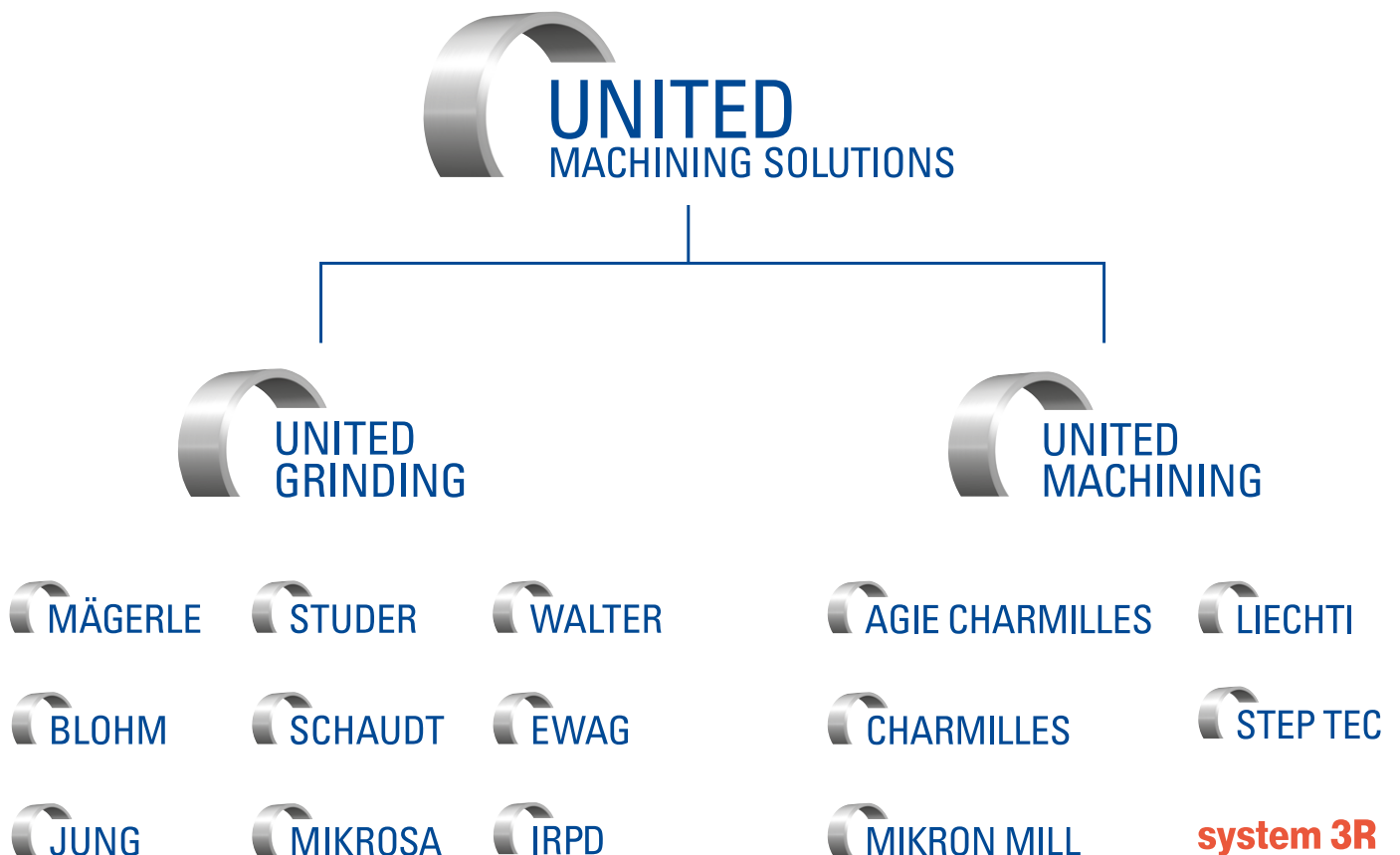
UNITED MACHINING SOLUTIONS

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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