MITSUBISHI ELECTRIC
Changes for the Better

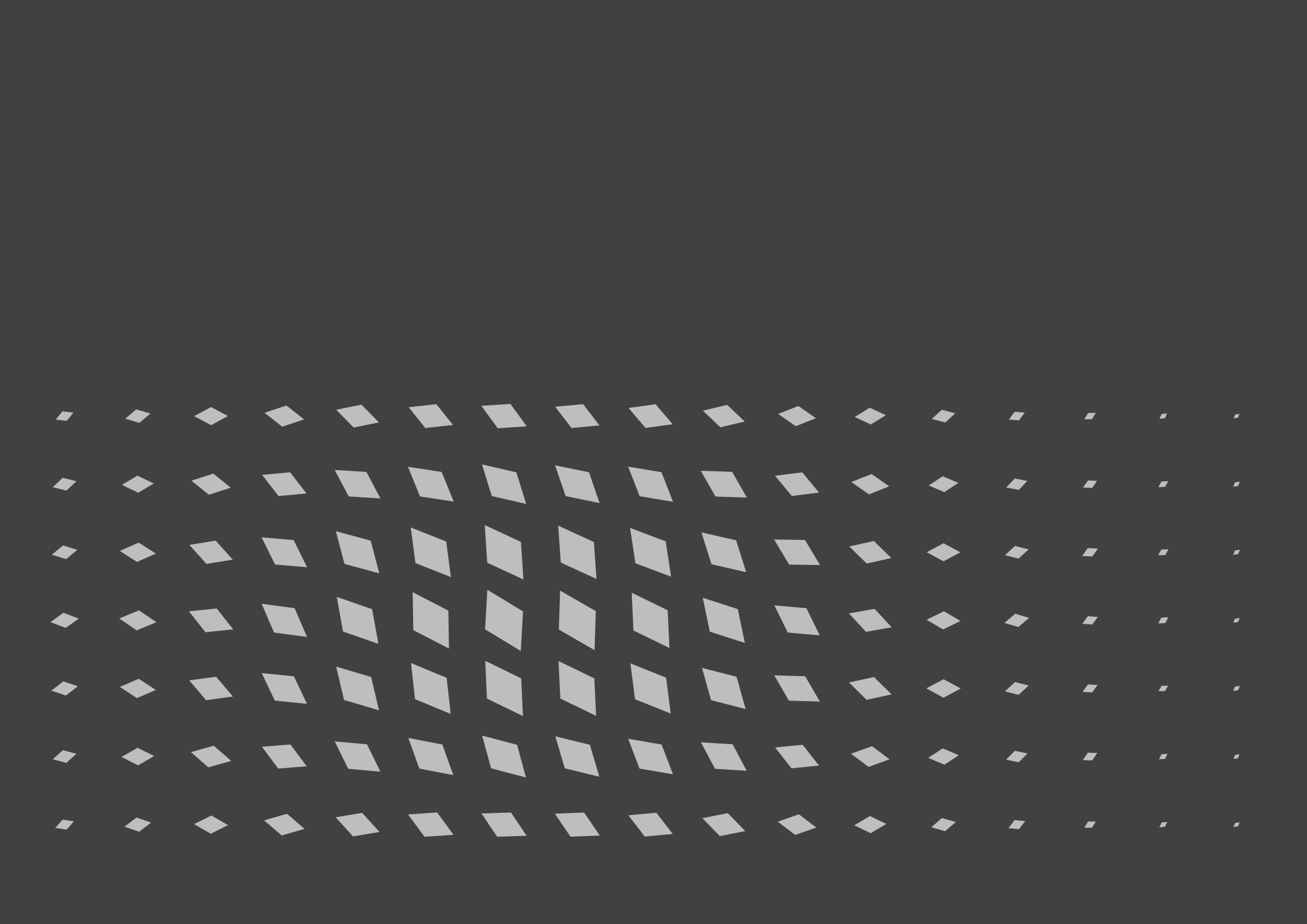
// MG12R and MG24R

Next-level machines. **Better business.**



Mitsubishi Electric EDM.
Changes for the Better – at every stage

Wire-cut EDM



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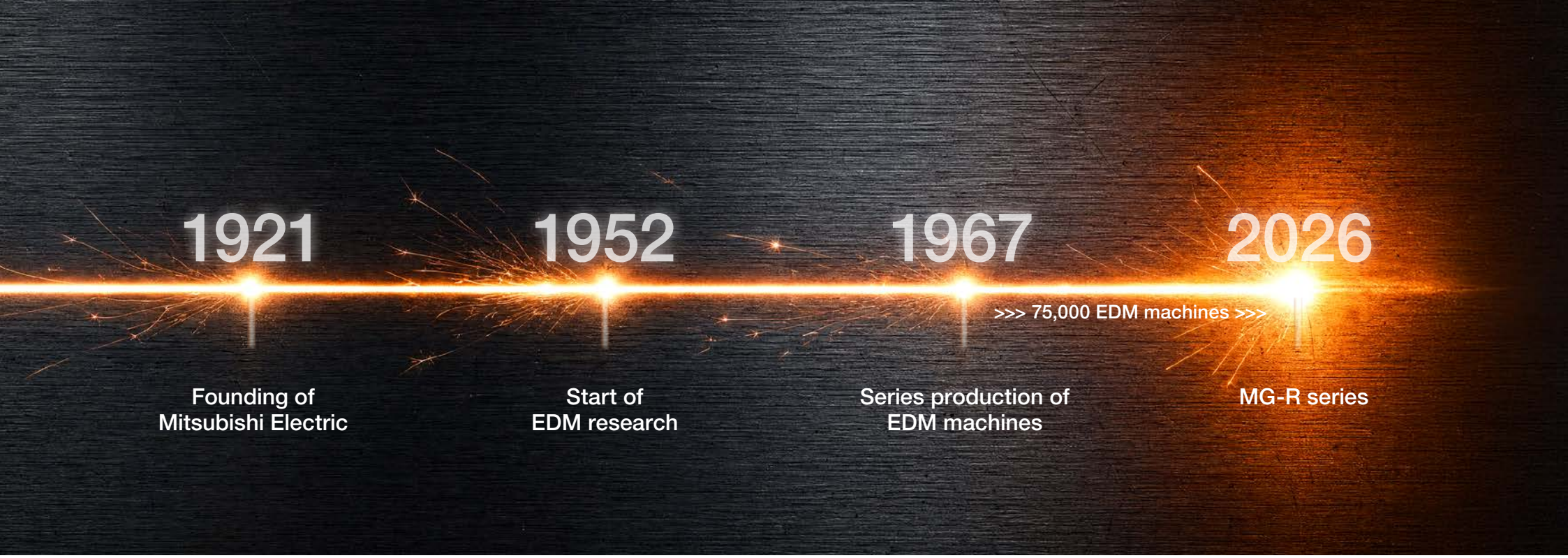
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// Our history

Advancing EDM since 1952. Now comes the MG-R.

Since 1921, Mitsubishi Electric has stood for engineering excellence and continuous development.
Today, our company employs around 150,000 people worldwide. We file approximately 8,000 patents every year.

Our own history in electrical discharge machining began with research in the 1950s and the start of series production in 1967. Since then, more than 75,000 EDM machines have been produced and delivered to our customers. Our machines offer the highest levels of process reliability, precision and dependability.

The MG-R takes this development to the next generation, with technologies that make your production more predictable, more autonomous and more cost-efficient.

Quality is part of our tradition





1952 Mitsubishi Electric conducts its first **scientific trials** on the industrial application of electrical discharge machining at its central research laboratory

1967 First hydraulic, servo-controlled machine units ready for **series production**

1970 **Sales** of EDM machines to European companies **begin**

1978 Mitsubishi Electric **opens** its German **headquarters in Ratingen** near Düsseldorf

1985 High-speed **H series** wire-EDM machines, with machining speeds of up to 250 mm²/min

1996 **FX series** with a new, revolutionary machine concept (fixed table / moving column)

1999 **64-bit CNC PC control**

2003 **FA-V series**, at that time the **world's fastest** wire-EDM system, with a cutting rate of more than 500 mm²/min

2004 High-precision **PA and FA-P series**

2007 **FA-S-Advance series** with 3D CAD/CAM system

2009 **Tubular direct drives** in the NA-Essence series

2012 **MV series** wire-EDM machines, predecessor of the MG-R

2014 **MP series**, a range of high-precision submerged wire-EDM systems

2017 **MV-R Connect** and **MV-S NewGen** wire-EDM series with D-CUBES control

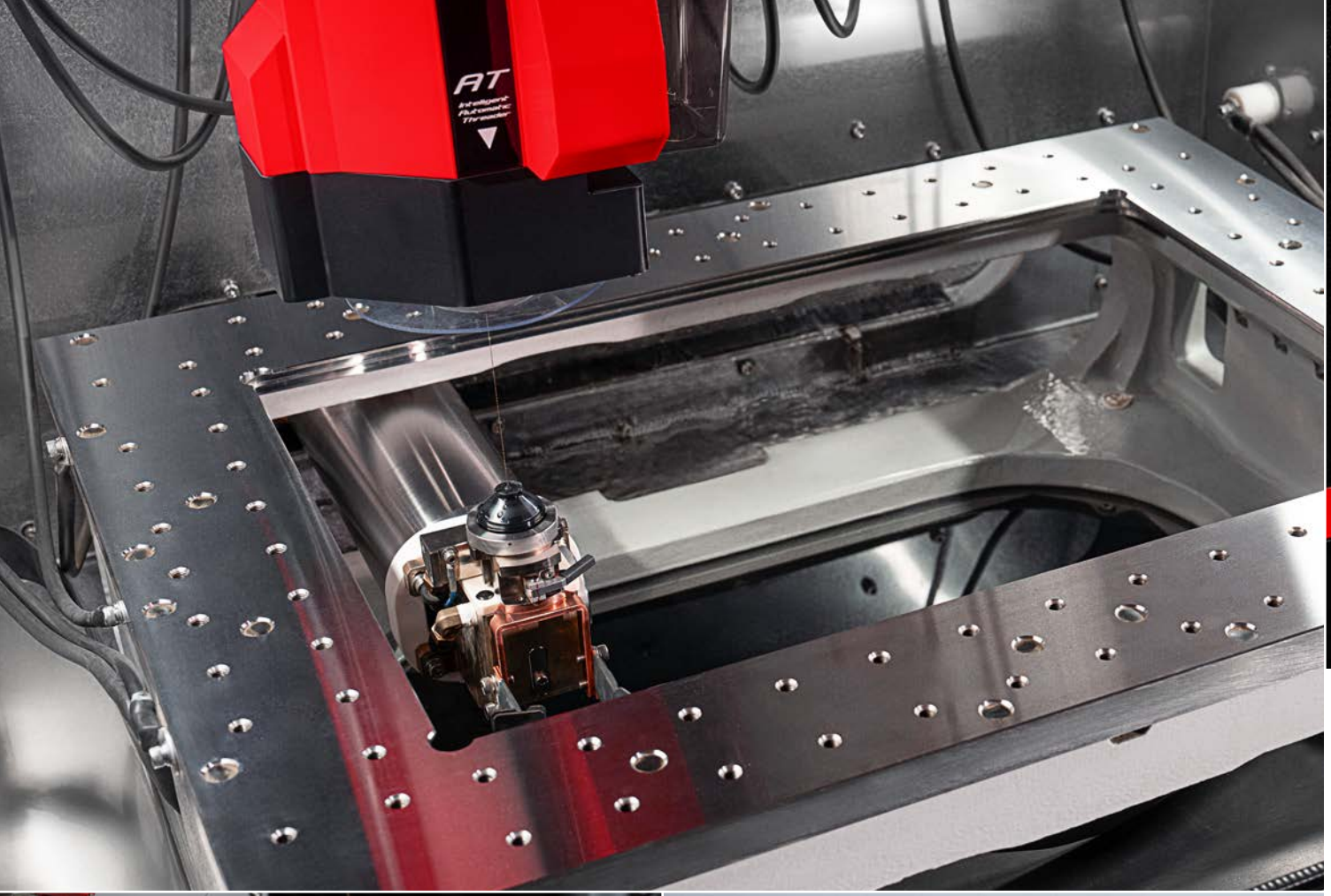
2018 **MP Connect** wire-EDM series

2020 **SG-R** and **SG-S** die-sinking-EDM series

2024 **MX900**, an ultra-precision oil-bath wire-EDM system

2026 The **MG-R** conquers the European EDM market


Revolution
MITSUBISHI ELECTRIC
MG24

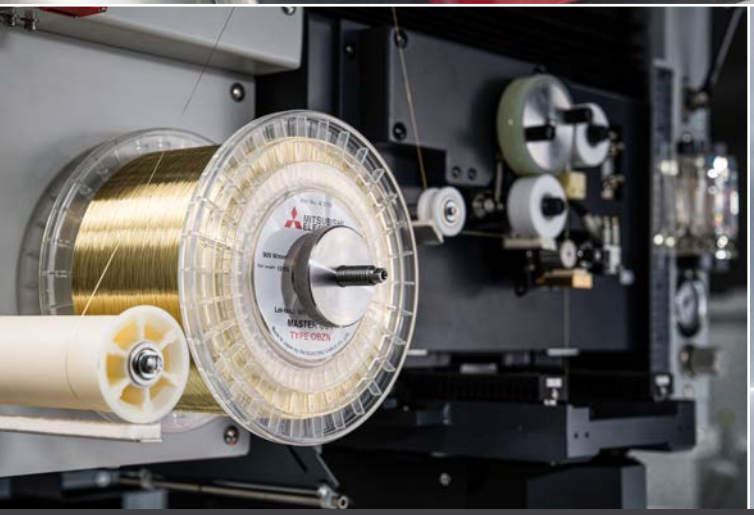


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A new level: the MG-R models

The new MG-R series combines Mitsubishi Electric's many years of know-how and extensive experience in wire-EDM with consistent further development. Numerous improvements to the MG24R and its compact sister model, the MG12R, make wire-EDM even more precise, stable, reliable and easy to use.

› Ready for the next level?






Revolution
MITSUBISHI ELECTRIC
MG12





Wire diameters from 0.1 to 0.3 mm, with smaller diameters available as an option, deliver micrometer-level precision.



Stability, reliability, precision

From the generator to the wire-threading system, every improvement is designed to deliver even more consistent precision and greater ease of operation. The result is the highest possible level of satisfaction – for you and for your customers.

- **Stability that never fluctuates.**
- **Reliability that never lets you down.**
- **Precision without compromise.**



// MG-R highlights

Next-level machines. Better business.



MG-R highlights

› Intelligent Auto-Threading (AT)

The improved wire-threading function reduces production downtime.

➔ page 12

› Optical Drive System // Tubular direct drive

The contactless drive and solid, high-quality machine body ensure positioning accuracy for at least 15 years – guaranteed by us!

➔ page 14

› Thermal Control System

Synchronized temperature control of the machine body and dielectric ensures consistent precision.

➔ page 16

› Controls

The optimized CNC control system makes complex machining processes simple.

➔ page 18

› Maisart (artificial intelligence)

Thanks to Mitsubishi Electric's AI, wire-EDM has never been easier. It has helped us further improve our cutting technology.

➔ page 34

› Fast return on investment

Thanks to its high reliability and availability, the MG-R quickly pays for itself. The total cost of ownership of our machines is among the most competitive on the market.

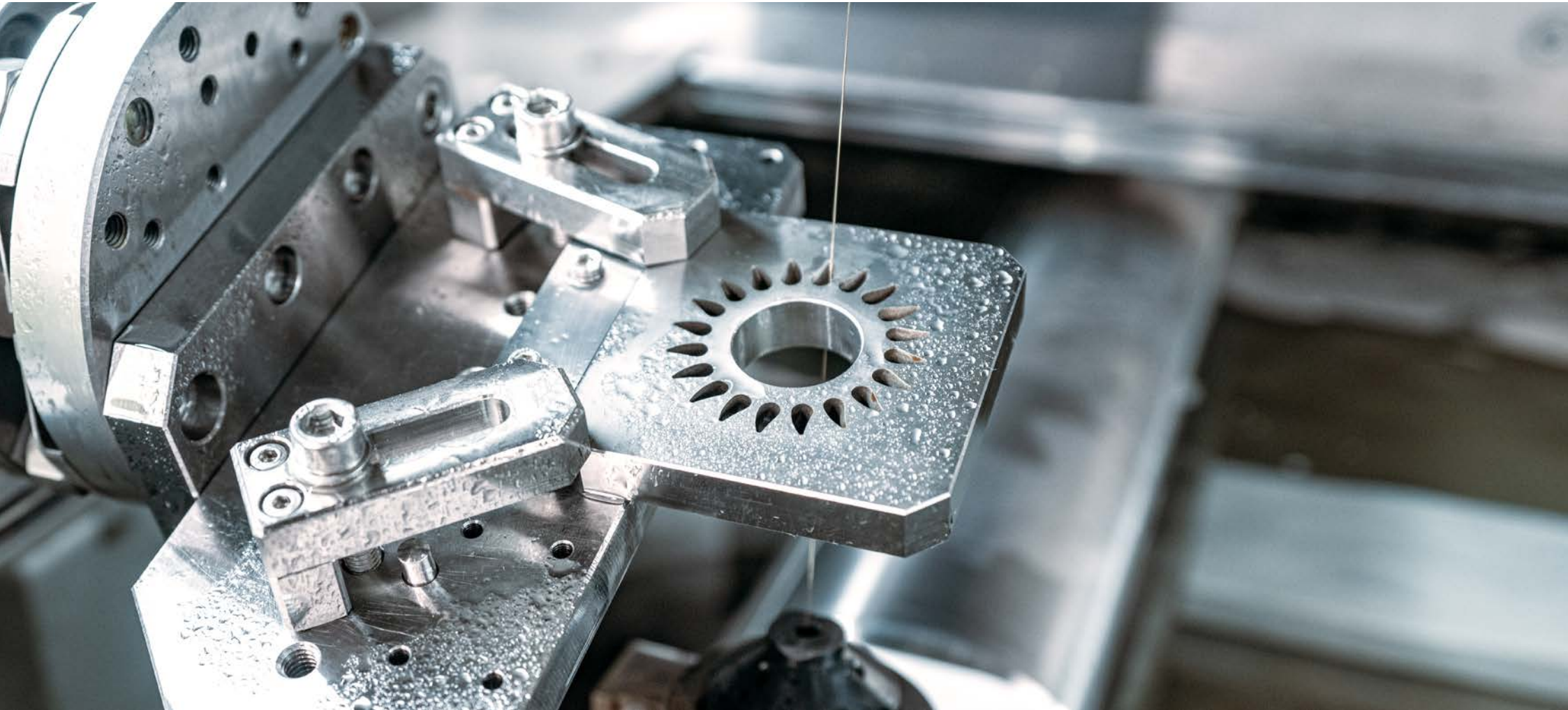
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// Intelligent Auto-Threading

The best wire-threading system on the market

For many years, intelligent automatic threading of the EDM wire – Intelligent AT – has been one of the key strengths of our wire-EDM machines. After a wire break or spool change, the machine rethreads the wire at any position, without time-consuming travel back to the starting position. This reduces manual intervention, increases machine availability and creates the conditions for largely autonomous 24/7 operation.

With the MG-R, Intelligent AT achieves an unprecedented level of reliability.



› Powerful, fast and low-maintenance

The wire-threading unit has been comprehensively redesigned: the wire is fed with greater force and is even less susceptible to contamination. Your benefit: no downtime.





› Cleaning cycle for the diamond guides

The diamond guides can be cleaned at the touch of a button without removing them first. Since the wire no longer needs to be realigned, you save valuable time.





15-YEAR

manufacturer's warranty on positioning accuracy!

// Optical Drive System

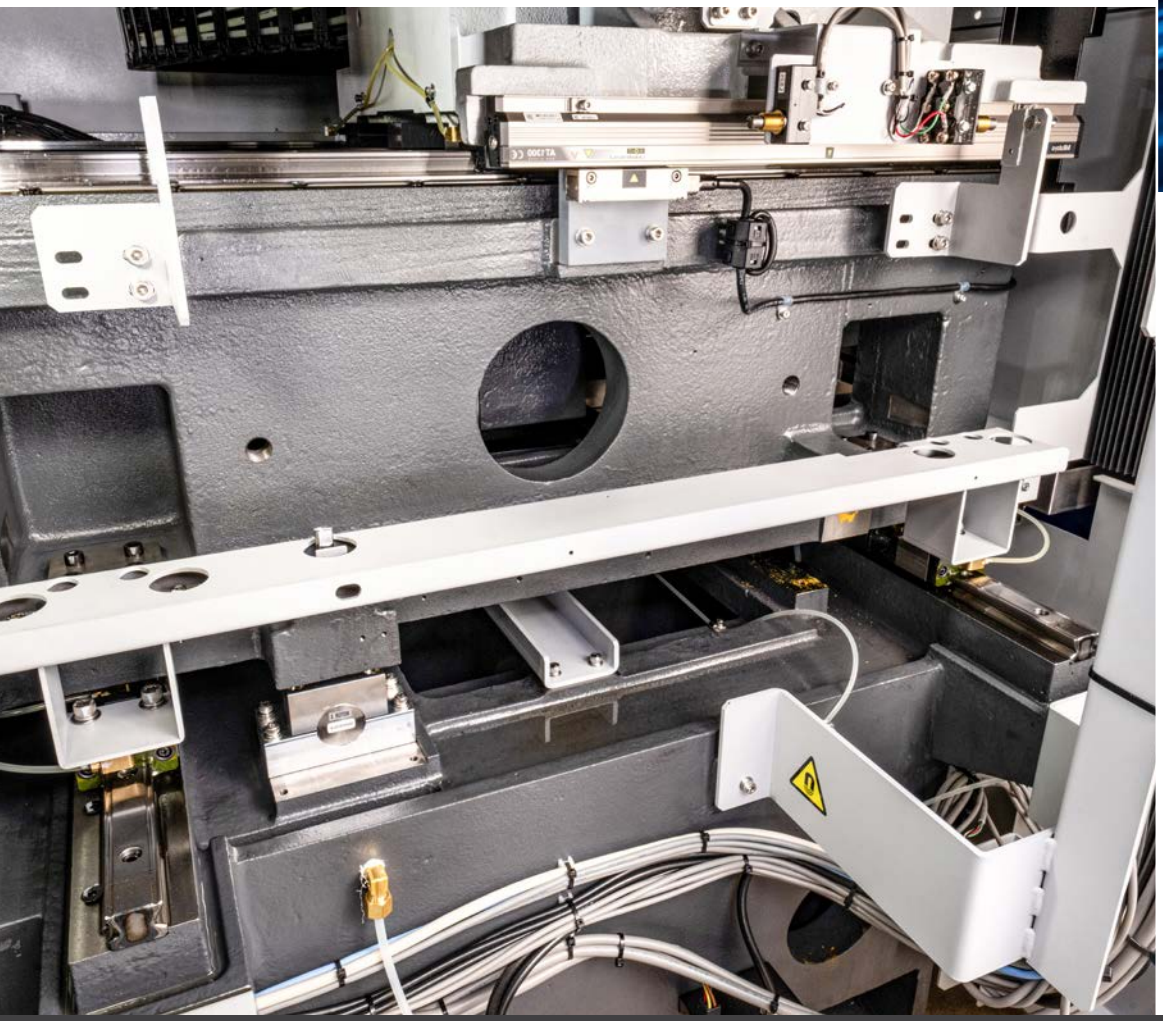
The perfect drive

The Optical Drive System with tubular direct drive remains one of the strongest selling points of Mitsubishi Electric EDM machines. The tubular direct drive converts energy directly into motion – without contact, without maintenance and, above all, without any long-term loss of precision. Combined with fibre-optic control, this superior technology can be used to its full potential.

Find out more here:
http://www.mitsubishielectric-edm.de/tsm

The solution to many challenges

What weaknesses in conventional drive systems concerned the developers at Mitsubishi Electric? Above all, unavoidable wear – but also lubrication, friction and the resulting heat, power consumption, backlash and cogging torque. These disadvantages can only be avoided if the drive operates without contact. That is why a contactless drive has been the foundation for better results and reliability lasting for decades from the very beginning.



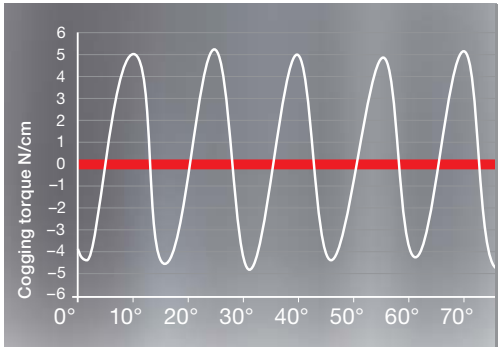


Communication at the speed of light

Mitsubishi Electric polymer optical fibres offer decisive advantages, not only over conventional copper cables but also over glass fibres. For you as the user, this primarily means greater durability and a noticeable gain in precision. The key factors are high transmission rates with minimal space requirements, combined with maximum flexibility and complete water resistance.

No disruptive cogging torque

Cogging torque in an electric motor causes fluctuating torque and uneven running. This is unacceptable in precision applications such as wire-EDM. The cogging-torque-free tubular direct drive is therefore the ideal drive for applications where maximum accuracy is essential.

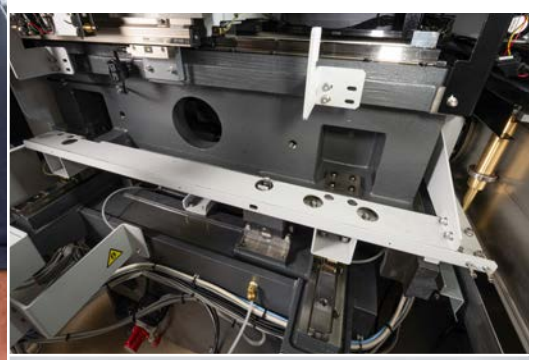




// Linear guides and Thermal Control System

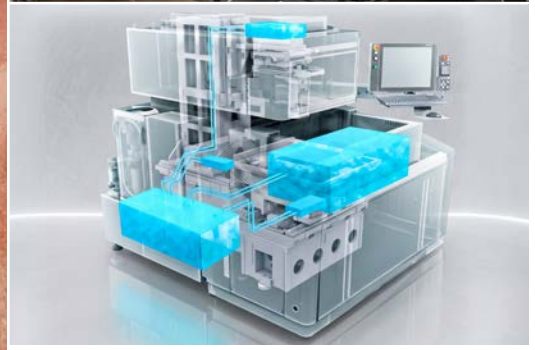
Reliability on every shift

The MG-R delivers consistent accuracy even during long operating times and under changing ambient temperatures, thanks to its improved linear guides and thermal stabilization.



› Linear-guide quality at the highest level

The MG-R uses high-precision linear guides that significantly improve positioning accuracy on the X and Y axes (repeatability up to 3 µm).



› Optimum thermal conditions through stabilization

The MG-R Thermal Control System automatically monitors the temperatures of the machine body and the dielectric and synchronizes them with one another. Suppressing thermal expansion during the EDM process ensures consistent precision.

// Crash Protection System

Your guardian on board

A smart EDM machine that detects a potential crash and counteracts it provides operational safety while saving time and money. If a workpiece has shifted or a slug has become jammed, the Crash Protection System in Mitsubishi Electric machines prevents a collision.



Our wire-EDM machines automatically detect a potential collision. If an obstacle is present in the travel path, it is detected electronically during approach by a change in drive load, and the control system immediately initiates a safe retraction.

You can see the reliable Mitsubishi Electric Crash Protection System in action in a video:

Go straight to the video!

www.mitsubishielectric-edm.de/cps-en

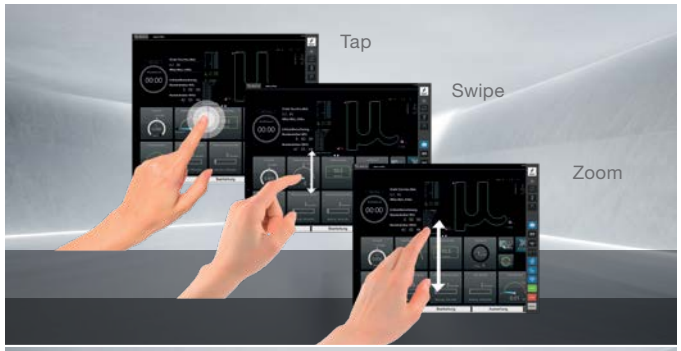




// Controls

Moving easily from A to B

User-friendliness and intuitive menus: the MG-R features an optimized CNC control system. The further-developed Launcher also makes your work easier.







› Multi-touch display

Intuitive operation via the large screen with modern gesture control enhances ease of use. The configurable user interface supports operators in their daily work by allowing key functions to be arranged freely.

› Guided dialogs

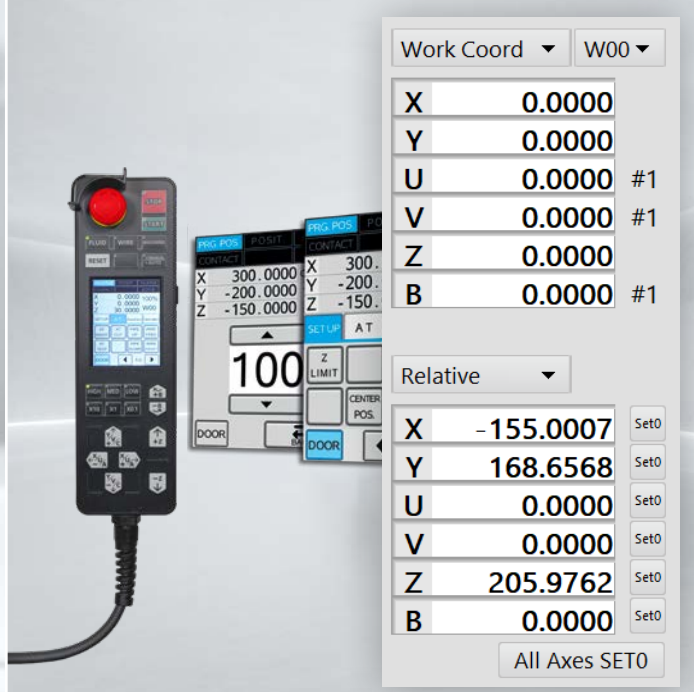
Guided dialogs take less experienced operators step by step through the entire process, from programming to starting the machining operation.
Checklists help to verify all process-relevant settings and machine conditions, ensuring uninterrupted machining and optimum results. Fully automatic alignment cycles are also included. 3D position detection can be performed manually (as standard) and automatically (as an option).

› Launcher

The Launcher makes it easy to create shortcuts. Screens and functions used frequently or preferred by the operator can be added to the Launcher. The intuitive interface also enables inexperienced users to get started quickly. Shortcuts added by the user in the Launcher can be deleted or rearranged.







› Intelligent D-CUBES control system

The operator has almost half a meter of workspace and is supported by a mouse and computer keyboard, just as on a PC. Clear machining monitoring provides information at a glance as well as detailed analysis wherever required.

› Slim, ergonomic handheld control unit

The ergonomically designed, intelligent handheld control unit combines all relevant functions for closed-loop control and setup operation in one unit. The integrated LCD display can be configured individually by the operator. Keys for traversing all eight possible CNC axes are included.

› Integration of up to 8 axes

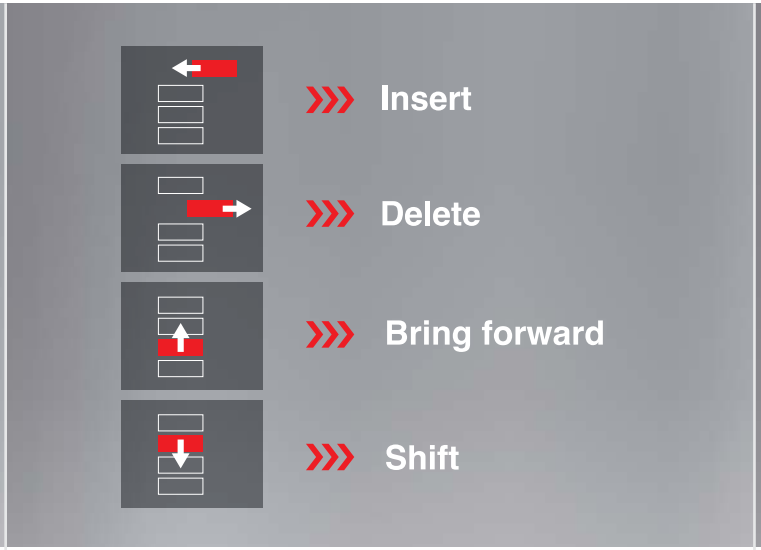
The MG-R can control up **to eight axes**, opening up a wide range of possibilities for the precision machining of complex workpieces. Intelligent coordination of the axis movements supports demanding machining tasks and provides a high degree of flexibility when implementing individual production requirements.

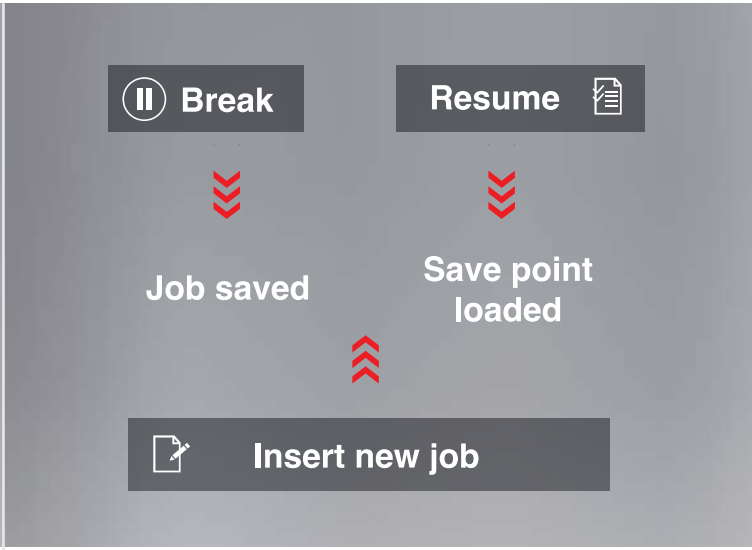
// Scheduler

Manage, reschedule, interrupt and resume jobs

The further-developed Scheduler offers extensive functions such as “zero point” and “mirror function”. The almost self-explanatory menus make flexible working and rapid responses easy. Last but not least, the Scheduler paves the way for maximum autonomous operation with multiple workpiece setups.







› Integrated job planning

Flexible operation through adaptable job planning: by simply assigning priorities, you can quickly respond to changing requirements and insert an urgent part into the schedule.

Multiple machining programs can be transferred to the Scheduler and managed there.

› Fast and flexible production planning

New jobs can easily be added during machining, or the sequence of pending operations can be changed. Job management with priority control allows the machining list to be modified without interrupting the machining process.

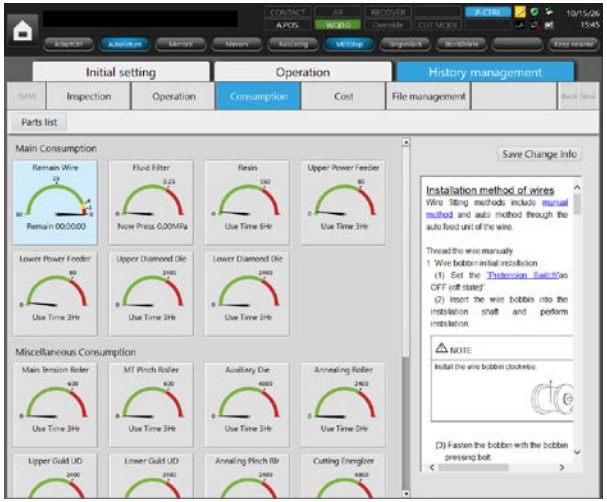
› Interrupt a job and resume it later

Even an ongoing machining operation can be interrupted easily when urgent jobs need to be processed. The control system stores the current machining status. Once the inserted job has been completed, machining can resume immediately from the point of interruption – flexibility at the touch of a button, without any programming effort.

Understand production processes. Calculate costs precisely.

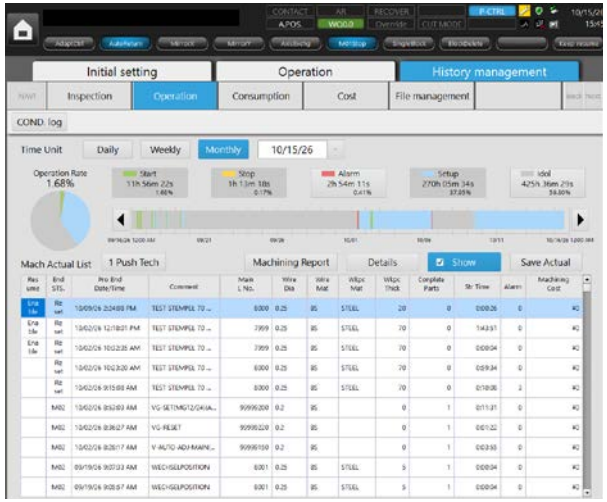
› Forward-looking maintenance management

All essential consumables are monitored online and displayed together with their expected remaining service life. For example, the filter pressure is displayed, including the estimated time until the next filter change calculated from it. You can also view the remaining service life of the wire spool currently in use at any time.



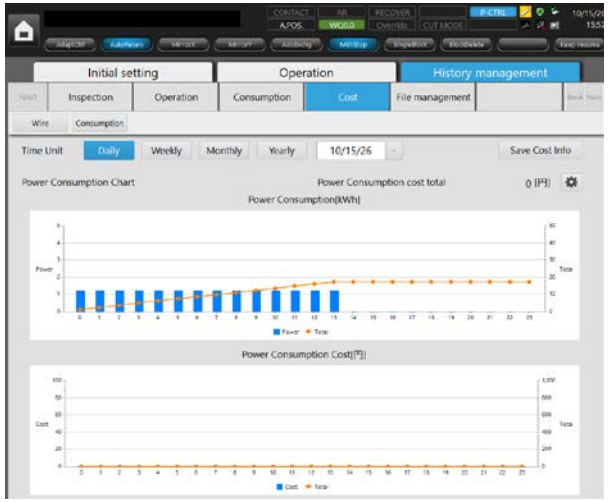
› Visual process management

Machine conditions displayed over time help you understand capacity utilization and support forward-looking production planning. A list of completed machining jobs, together with the resulting machine occupancy times and individual costs, completes the overview.



› Operating cost analysis

Component wear as well as energy and wire consumption are recorded. With knowledge of the individual costs and by taking them into account in the machine's internal analysis, you can analyze total costs and calculate upcoming machining jobs.

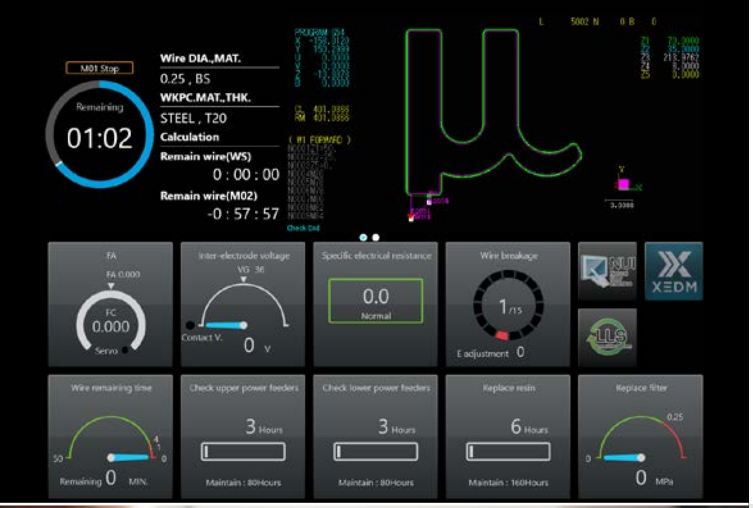




// EDM-PiLOT, XEDM, XpressCAM

From 3D model to finished part – faster and easier

One special feature of Mitsubishi Electric EDM machines is automated 3D programming at the touch of a button, with a streamlined and user-friendly workflow. This is made possible by the revolutionary user guidance in our CAM programs XEDM and XpressCAM: EDM-PiLOT. In just a few steps – or even with a single click – it generates the appropriate machine commands from digital models.



Programming is no magic!

The compact XEDM tool on the machine control and the more comprehensive XpressCAM software for the PC both enable intuitive programming based on 3D data. Thanks to the revolutionary ease-of-use concept, right through to fully automatic NC programming, lengthy training is not required.



XEDM on the machine control

Need to program 3D data directly at the machine, with maximum flexibility and speed? No problem. The operator can define the cutting sequence, influence the separation of slugs and change other parameters. They can do so, but do not have to, because XEDM intelligently suggests the optimum strategies and settings automatically.



XpressCAM

XpressCAM is the extended PC version of XEDM and can also process 2D data. The system guides you through the required parameters step by step. As with XEDM, you also have the option of creating an NC program with a single click.



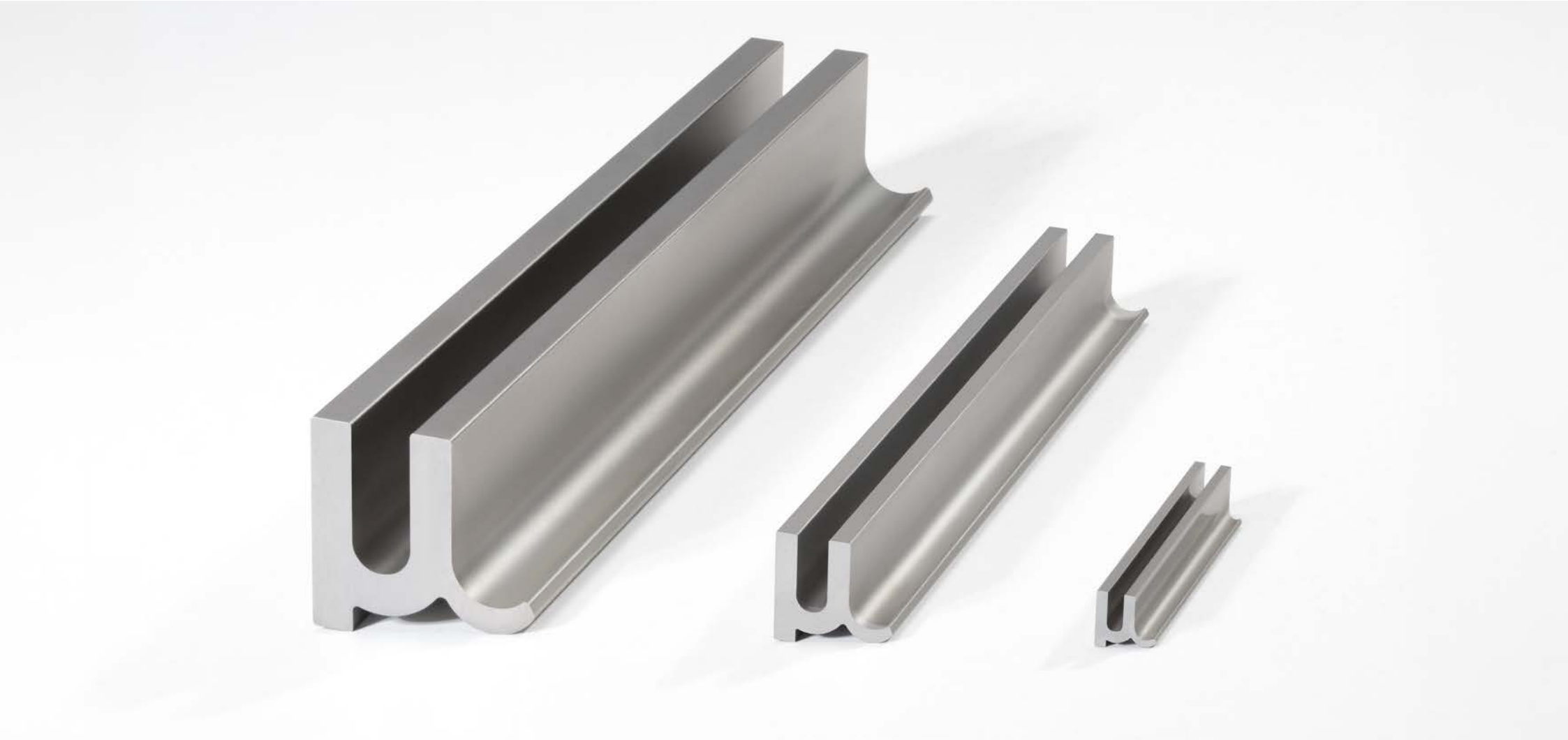
A sales manager who can suddenly program?

Find out from Mitsubishi Electric Sales Manager Hans-Jürgen Pelzers how the programming system can help you save tens of thousands of euros.

Watch the video!
mitsubishielectric-edm.eu/xedm-simply-avoid-costly-mistakes

// Ultra Finish Surface and Precise Finish Circuit

When an especially smooth finish is required





The MG-R's Ultra Finish Surface technology combines the highest precision with outstanding surface quality. The result is workpieces that deliver convincing performance in all the dimensions that matter:

› Complex geometries. Manufactured with precision.

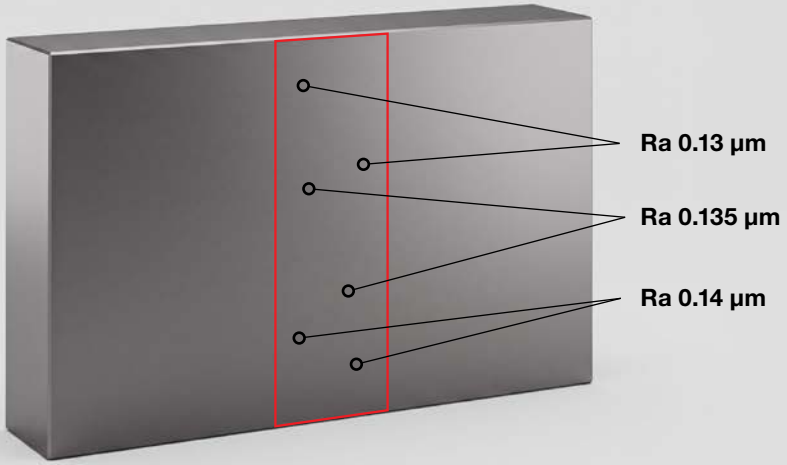
Complex contours and demanding geometries are produced with the highest accuracy. The result is workpieces that precisely meet the defined requirements.

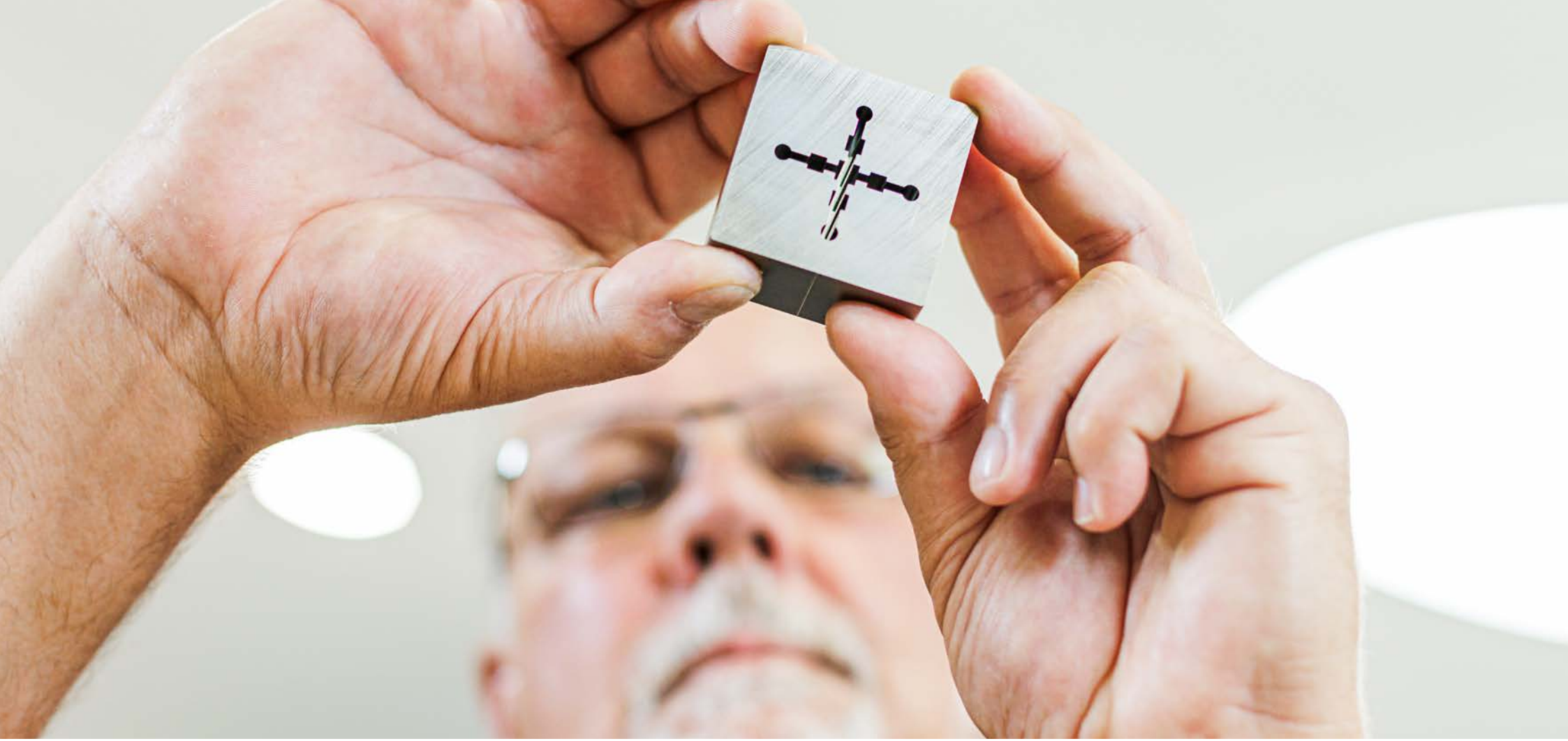
› Precisely parallel. Reliable fit.

Precisely coordinated motion sequences ensure a high degree of parallelism across the entire machining height. This guarantees consistent results and reliable fit accuracy.

› Homogeneous surfaces. Less rework.

Ultra Finish Surface produces particularly fine and homogeneous surfaces. This reduces post-machining requirements and provides the basis for workpieces with a high-quality surface finish.



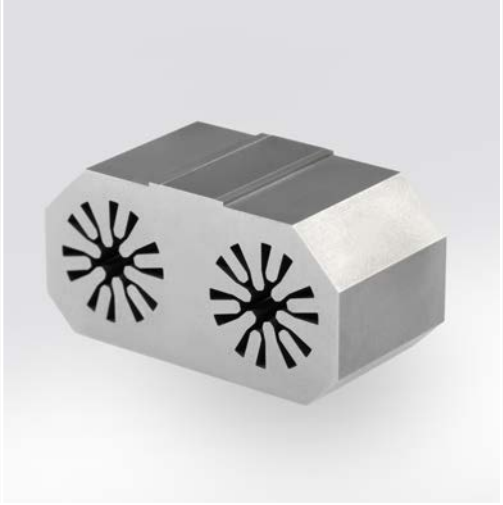


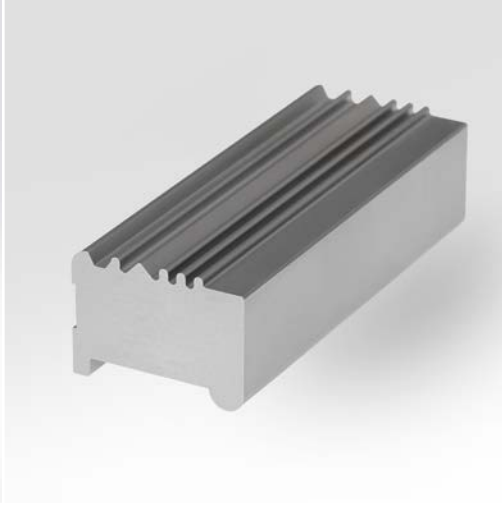
// Sophisticated technology for demanding industries

Precision opens up new possibilities

Where milling reaches its limits, wire-EDM is only getting started. Tapered cuts with different contours on the top and bottom, extremely small radii and the machining of extremely hard or already hardened materials are no problem for our wire-EDM systems.







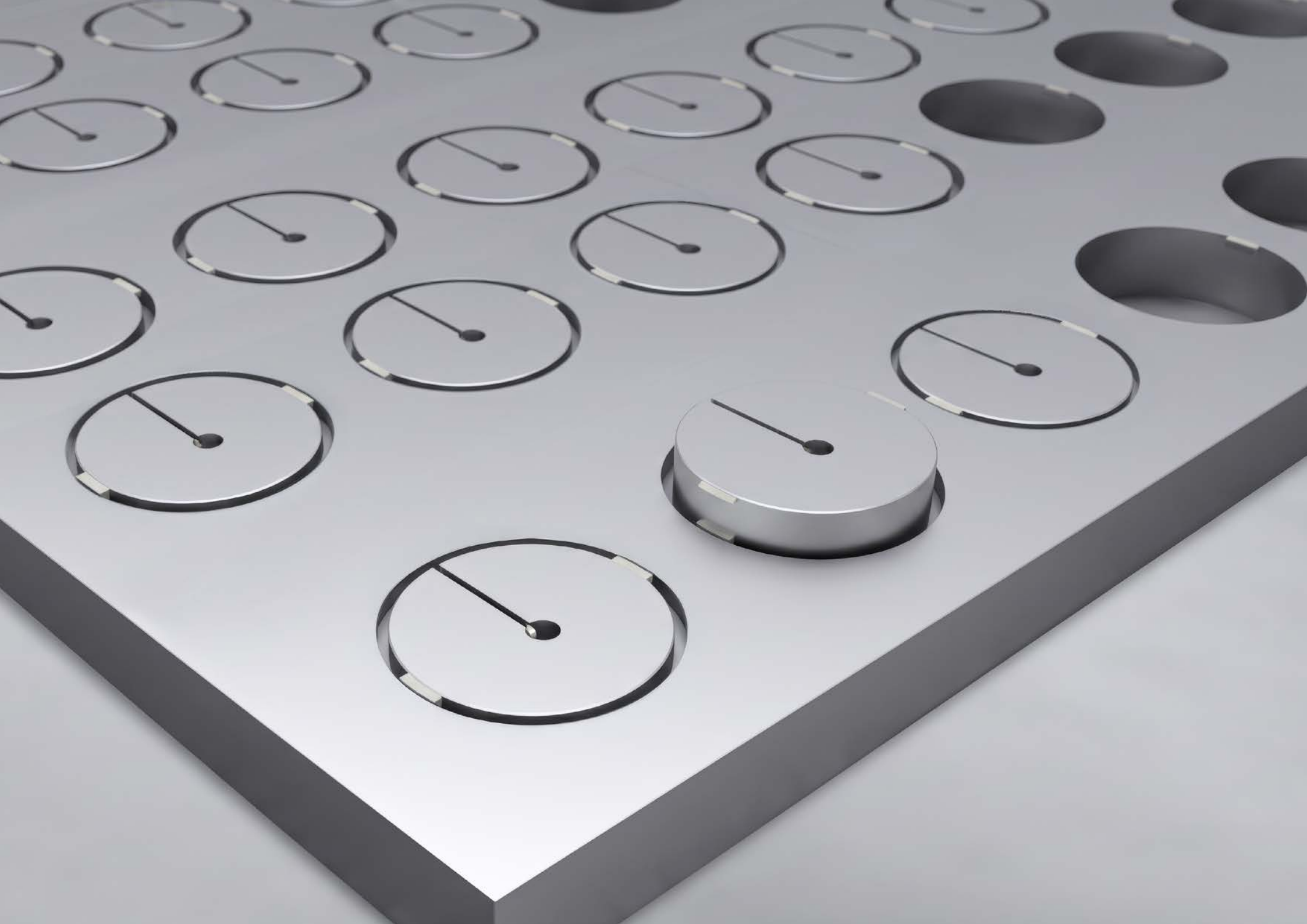


Many industries rely on us

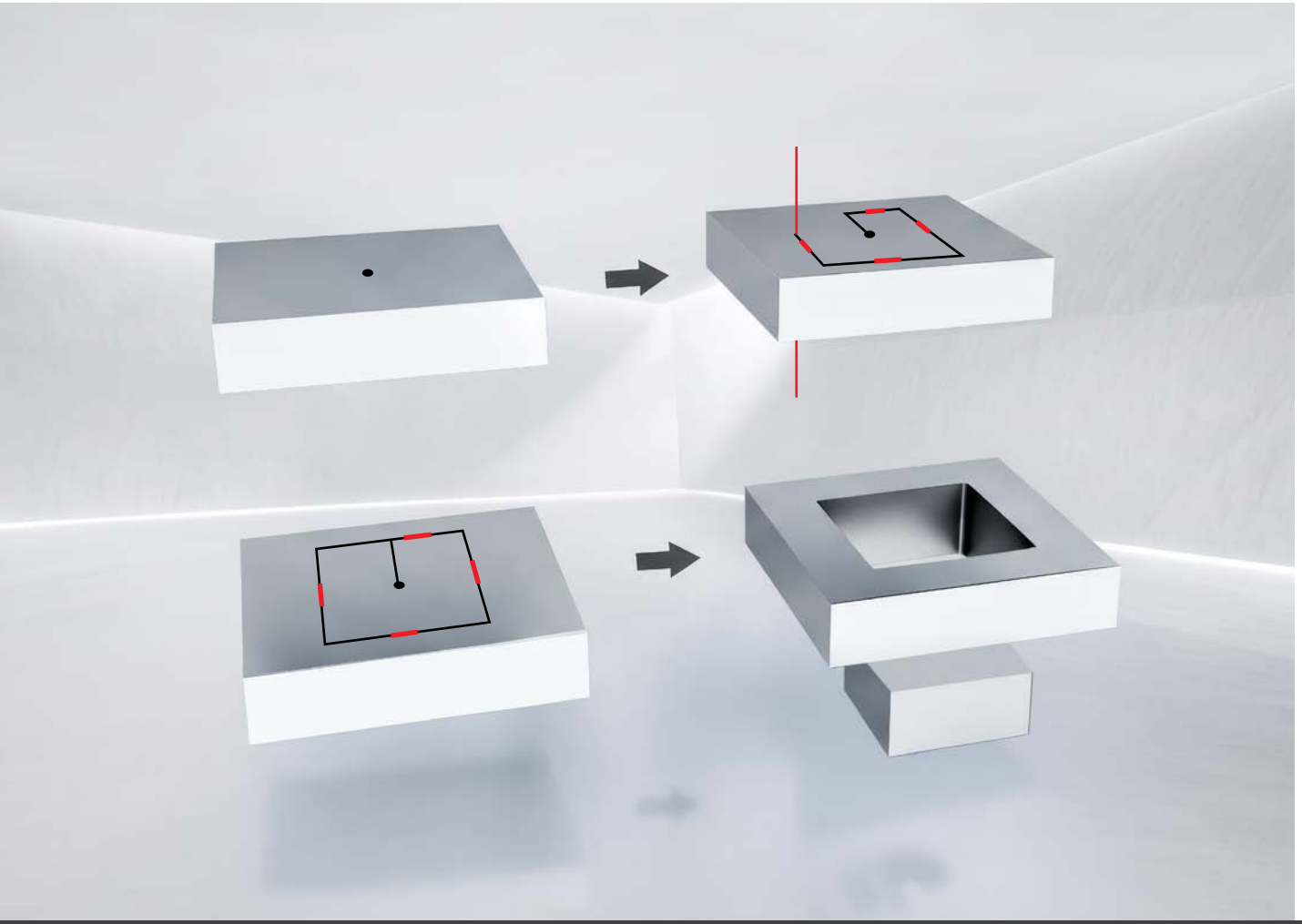
Where outstanding accuracy is required and the finest details matter, Mitsubishi Electric EDM systems are in operation. Our customers include companies from the following industries:

- Medical technology
- Automotive industry
- Communications technology
- Electrical engineering
- Aerospace technology





Machine through-holes more efficiently



With Corehold technology, slugs are held in place during machining by deliberately leaving retaining bridges in the workpiece. This makes it possible to rough-machine several through-holes without manually removing the slugs in between.

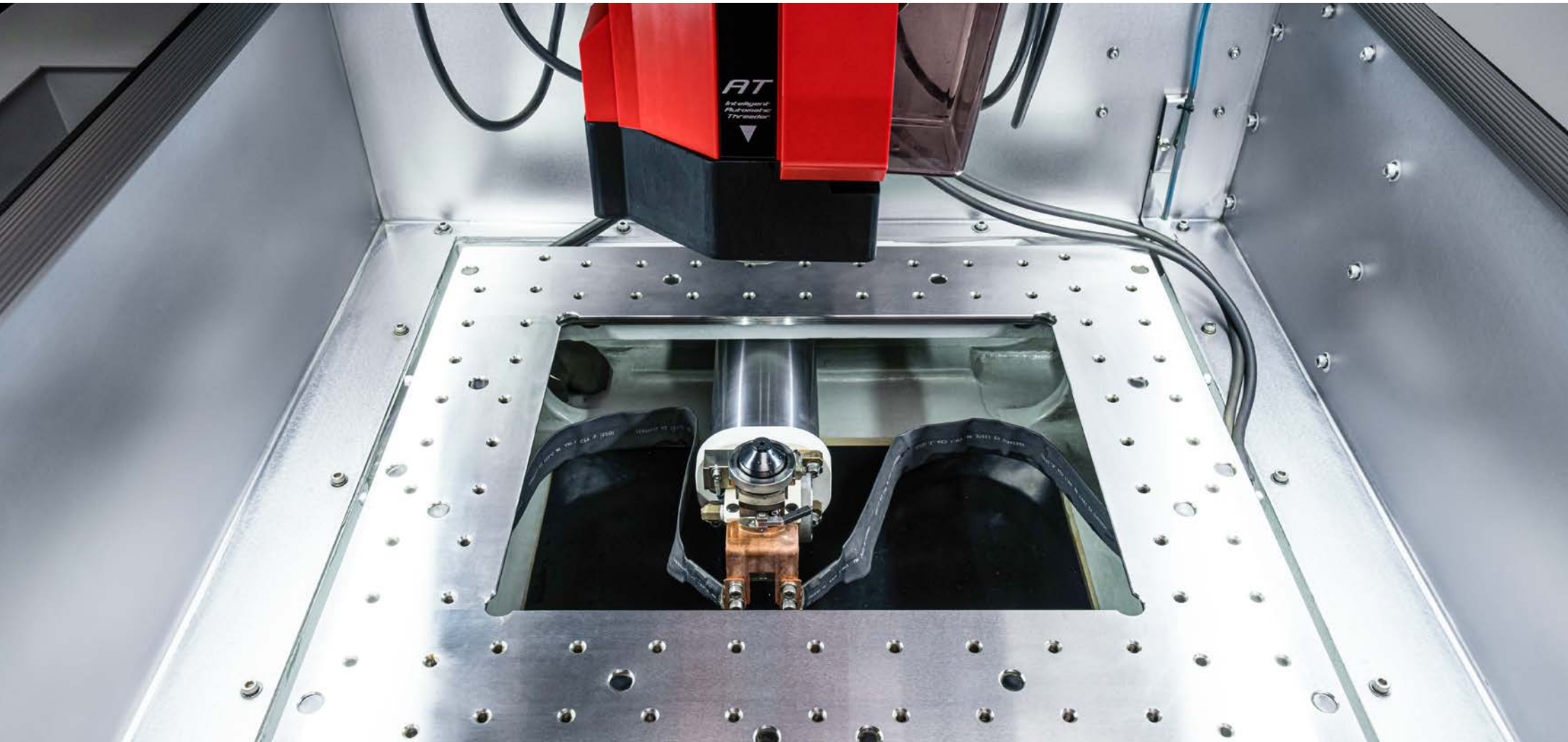
After roughing, all slugs are removed in a single operation and the contours are then finish-cut. The need to stop the machine repeatedly is eliminated, reducing post-machining time from several hours to just a few minutes.

This reduces downtime and manual intervention, shortens non-productive time and increases machine utilization. It also enables unattended long-running operations overnight or at weekends.

// Convenient access to the work area

Easier cleaning, faster return to production

The MG-R provides particularly convenient access to the work area inside the tank. This makes the tank easy and efficient to clean, simplifying everyday operation.



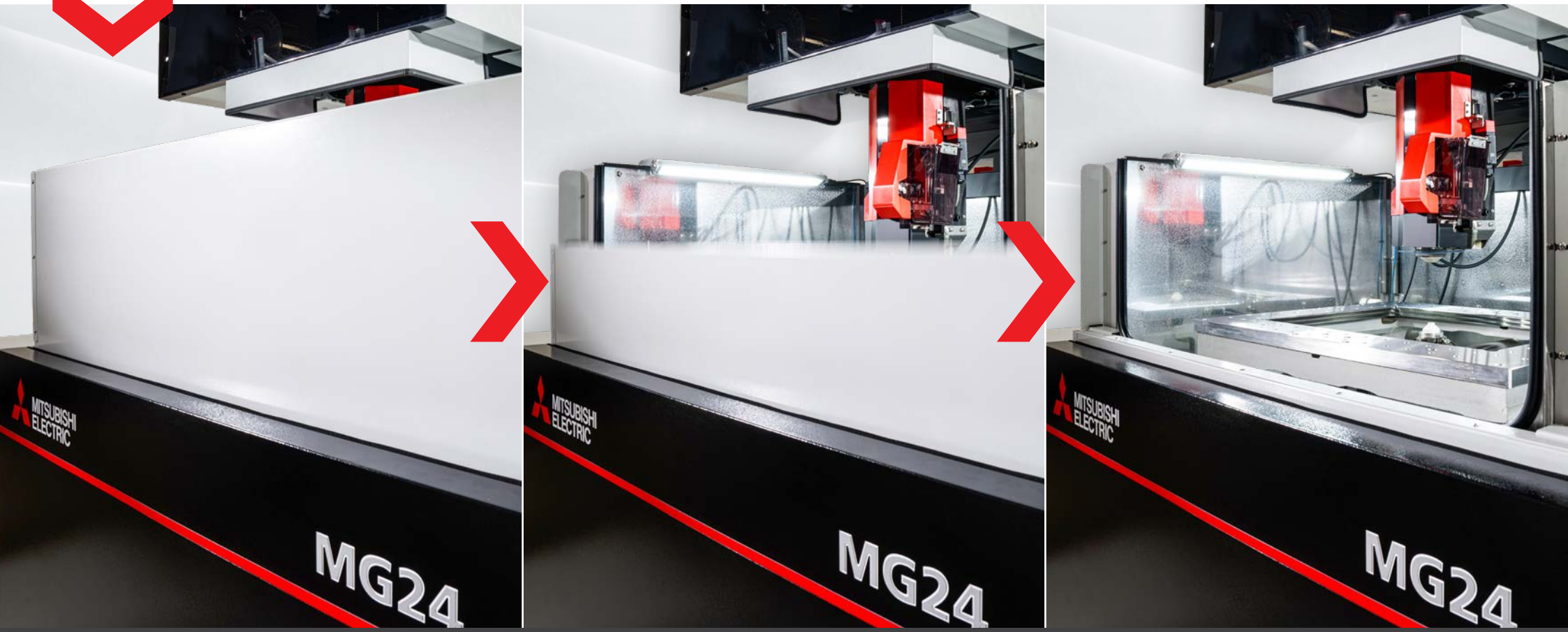
// Ergonomic machine design

Well thought out, intelligently designed

Mitsubishi Electric EDM machines are characterized by their user-friendly design. All essential controls for setup, programming and maintenance are directly accessible from the front of the machine. The complete wire path, automatic wire-threading system and wire-guide heads are easily accessible. This is also made possible by the open design, which does not obstruct the view of the machining process.

The door that simply disappears

The automatic vertical sliding door saves time and space and makes workpiece setup considerably easier.

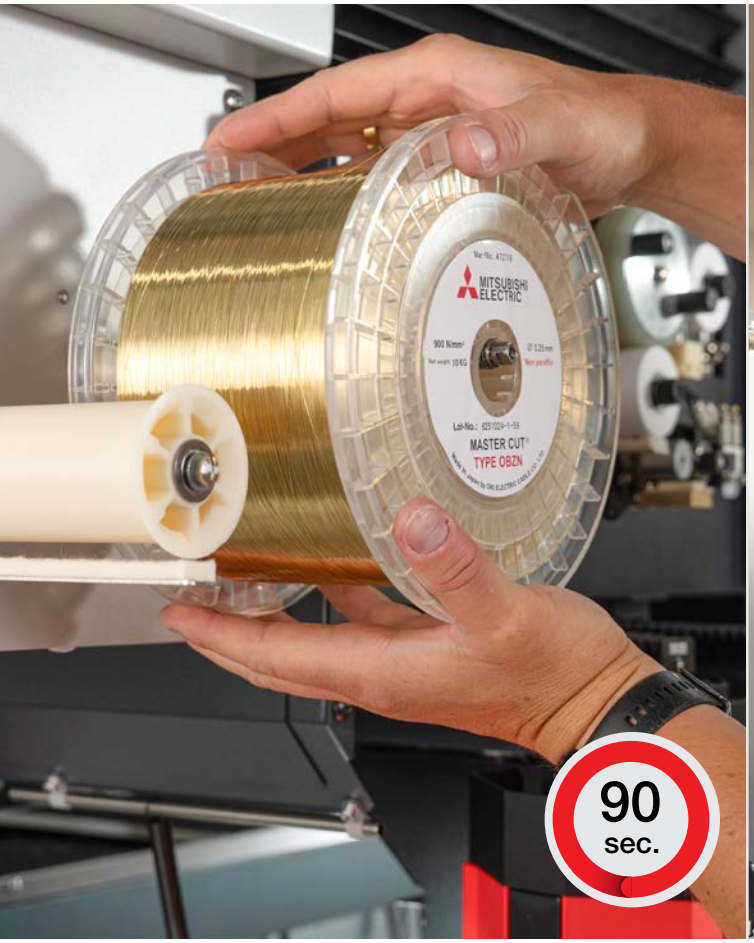


// Easy maintenance

Everything done quickly



EDM-wire change



Simply replace the spool and guide the EDM wire through the transport rollers – the machine is ready to operate again in 90 seconds.

Watch the video now:
mitsubishielectric-edm.eu/spool

Fast filter change



No tools and no time wasted: two hands and 30 seconds are all it takes to replace the filter.

Go straight to the video:
mitsubishielectric-edm.eu/filters

Replace the power contact



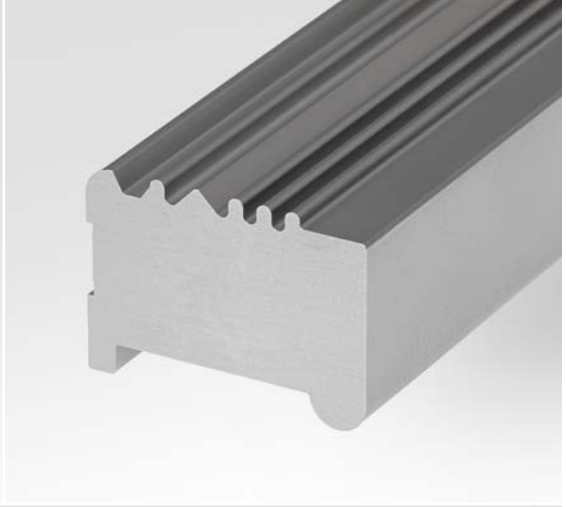
Replace the power contact by hand using a small measuring aid – at a speed fit for Formula 1.

See it for yourself:
mitsubishielectric-edm.eu/power

For more information on original spare parts, wear parts and consumables, see page 50 or visit **www.edmshop.de**.


Maisart
Maisart
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qh'vrel'klyxuun<0xF/01> :: 0011[[[ ]] zh'qrrr'
vraxxul thryx'q'oxhvel#[10.01.00] => 0x0D~~ thryx'q**
zhr'keth'ulvox'klyx







// Maisart

Consistently high precision thanks to AI

For many years, Mitsubishi Electric has been using artificial intelligence to systematically advance the possibilities of modern wire-EDM. Our in-house AI, Maisart, helps the machine control machining processes intelligently and make optimum use of the available potential.

The MG-R series uses the latest generation of Mitsubishi Electric's Maisart technology. This enables particularly precise, reliable and efficient machining and helps operators achieve consistently high-quality results.

The workpieces shown on this page demonstrate what is possible with the MG-R and Maisart: the highest accuracy, demanding geometries and first-class surfaces in a quality that makes the difference.

› Power Master

Power Master also contributes to process stability. Stepped workpiece geometries, cross holes and other obstacles to a stable cutting process are detected immediately during the main cut, and the control system automatically adjusts all necessary parameters when required.



“Mitsubishi Electric wire-EDM machines offer unbeatable value for money. They enable us to sustainably improve quality, accuracy and process reliability at Kleiner GmbH.”

Christian Hamann,
Authorized Officer & Technical Director
Kleiner GmbH

Highly profitable!

Our customers want machines that keep running, trouble-free, with as little maintenance as possible and without requiring constant supervision of the EDM process. The MG-R fulfils this requirement to an unprecedented degree: using it reduces the time and cost required for every individual workpiece. It pays off!

The benefits for your company:

- ✚ Comparatively low purchase costs
- ✚ Low material consumption
- ✚ Low power consumption
- ✚ High productivity thanks to reduced downtime

The bottom line: low total cost of ownership, high machine profitability, more profit for your company



"Given the many benefits, we are very happy with our investment."

Ronny Feil and Peter Buchert,
Managing Directors, Buchert & Feil GmbH

See for yourself in just two minutes –
with our EDM cost calculator!

mitsubishielectric-edm.eu/edm-tco-calculator/ →



// Options for the MG-R

Tailored to your requirements

Even the comprehensively equipped MG-R wire-EDM machines offer numerous expansion options. Select the technical features that best suit your applications. Almost all optional features can also be installed at a later date. This keeps your machine flexible over the long term and allows it to grow with your requirements.



Available as an option

› Water // Cooling // Filtration

- Automatic water replenishment
- Connection to an external chiller
- Automatic filter changeover

› Measurement // Precision

- 3D measuring probe
- Equipment package for precision taper machining

› Lighting // Status

- ERGO-LUX machine lights
- Highly visible status light

› Wire // Consumables

- 20 / 25 kg wire station
- Use of fine wire (0.05 / 0.07 mm)

› Additional axes // Rotary spindles

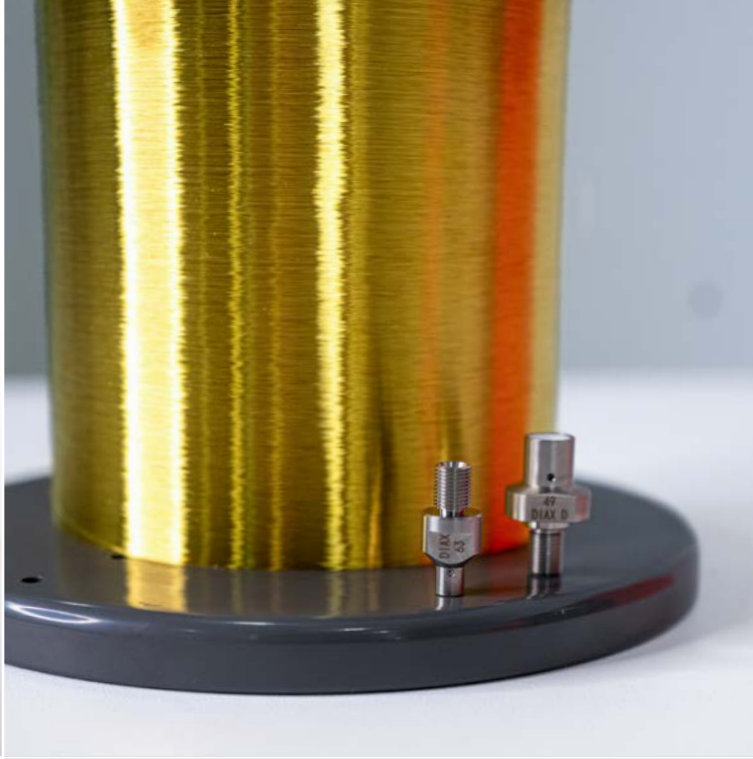
- Integrated B axis
- Integrated rotary/tilting axis
- Mini rotary axis (rotary spindle)
- Integrated rotary spindles
- Tool Package (for machining rotationally symmetrical tools with PCD or CBN inserts)

› Control-side configuration

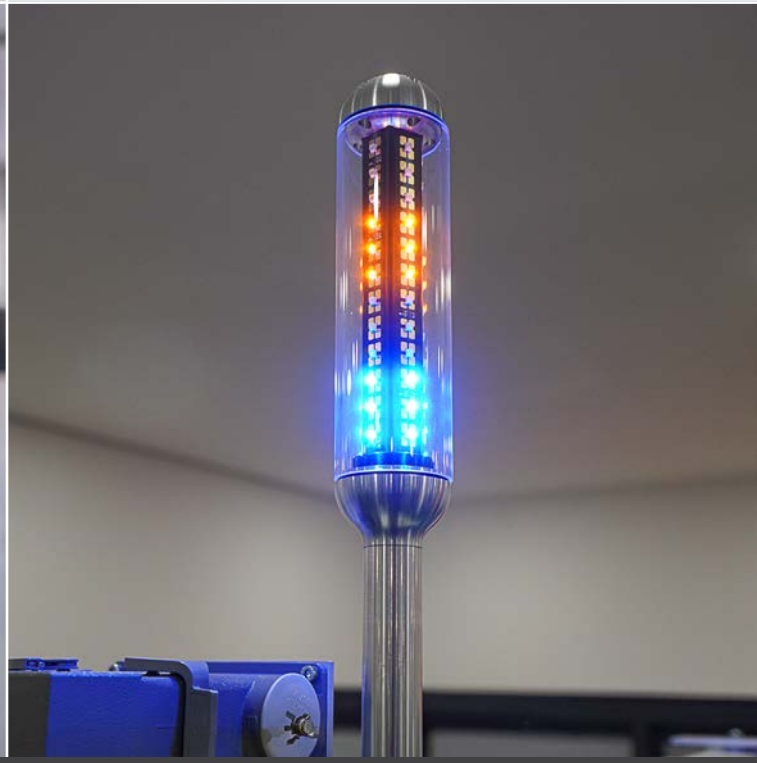
- Control system on the left-hand side (MG12R only)

› Interested in further equipment options? Contact us.
Our sales team will be happy to advise you.











// Automation: Cube Cell
and ProduCell / DiamondCell

Plug & Play for your EDM production

Automation without a complex project solution
More machine operating time, fewer manual interventions and an investment that stays within budget: with Cube Cell and ProduCell / DiamondCell, Mitsubishi Electric offers ready-to-use automation products designed specifically for the requirements of EDM machines.

Instead of planning an individual project solution from scratch, you receive a coordinated system consisting of an EDM machine, robot and integrated cell software, developed from a single source and ready for productive operation. This shortens planning, commissioning and support processes and makes the introduction of automation more predictable.

Run your EDM production autonomously for up to 80 hours, including over the weekend. This increases machine operating time, raises output and creates a tangible competitive advantage.

Would you like to find out more?

Contact us or first take a look at our Cube Cell web page:
mitsubishielectric-edm.eu/edmcell-cube

// Your benefits at a glance

Up to 80 hours of autonomous operation possible

› Everything from a single source

Mitsubishi Electric combines the EDM machine, CNC control, robot and cell software into one coordinated system. Support and training are provided by an automation team with EDM expertise.

› Plug & Play instead of a complex project solution

Both Cube Cell and ProduCell / DiamondCell are ready-to-use, coordinated products for automating EDM machines. You receive a solution that does not have to be individually engineered first, but can be installed quickly and commissioned within three days, including training.

› Developed specifically for EDM

The machine, robot and process are coordinated with the requirements of wire-EDM. This reduces interfaces and creates a reliable basis for automated production workflows.

› Integrated software

The cell software is already designed for the EDM application and is part of the complete system. This simplifies coordination between the machine and the automation system and ensures a continuous process.





Cube Cell

› Budget-friendly investment

A standardized, ready-to-use solution reduces planning and integration effort compared with an individually developed project solution. You invest specifically in more operating time and production capacity, with a predictable budget.

› Compact footprint

Thanks to its compact, self-contained design, Cube Cell can be integrated into your production area while saving space.

› Technical data

- Net weight: 1,800 kg
- Footprint: 1.25 × 1.55 m
- Transfer weight on holder: up to 10 kg
- Workpiece size: 100 × 100 × 150 mm

ProduCell / DiamondCell

ProduCell is a proven automation solution for automated production with wire EDM machines. DiamondCell is the ProduCell version specifically designed for grinding wheel profiling, including the dedicated DressCam X programming system. Various configurations enable flexible adaptation to individual production requirements.

ITS rotary spindles and magazine systems are available in different versions. This allows capacity, magazine configuration and workpiece sizes to be optimally matched to the respective application.

A Mitsubishi robot handles automated workpiece handling. The seamless integration of all components makes ProduCell a powerful, reliable and perfectly coordinated complete solution from a single source.

› Technical data

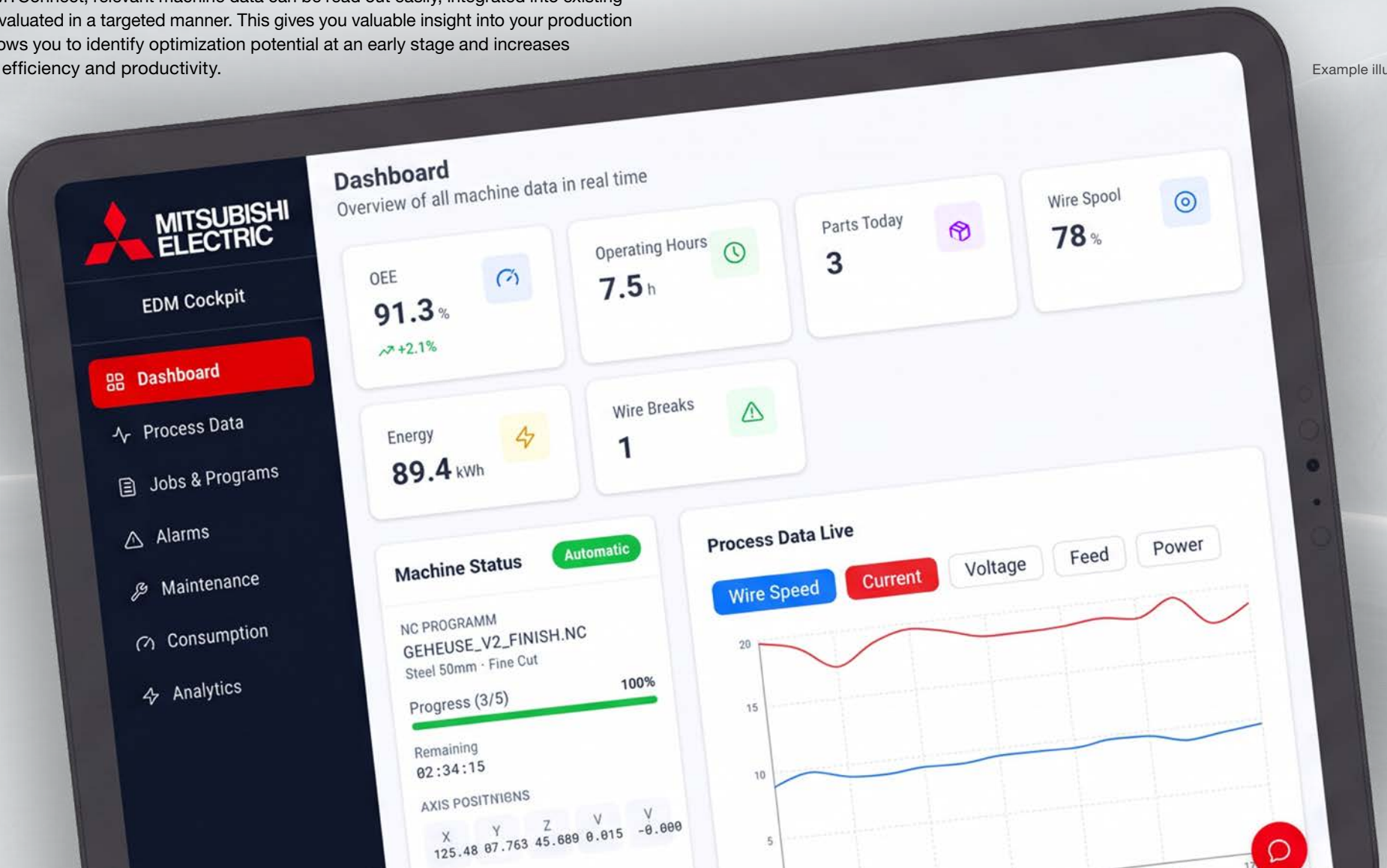
- Magazine positions / max. disc diameter:
  20 / 250 mm | 24 / 200 mm | 32 / 150 mm
- Max. disc/workpiece length including holder: 200 mm
- Max. workpiece weight: up to 20 kg*
- Robot: Mitsubishi RV-20FRM

*Maximum load at the robot flange. The permissible workpiece weight depends on the disc/workpiece length including holder and on the diameter.

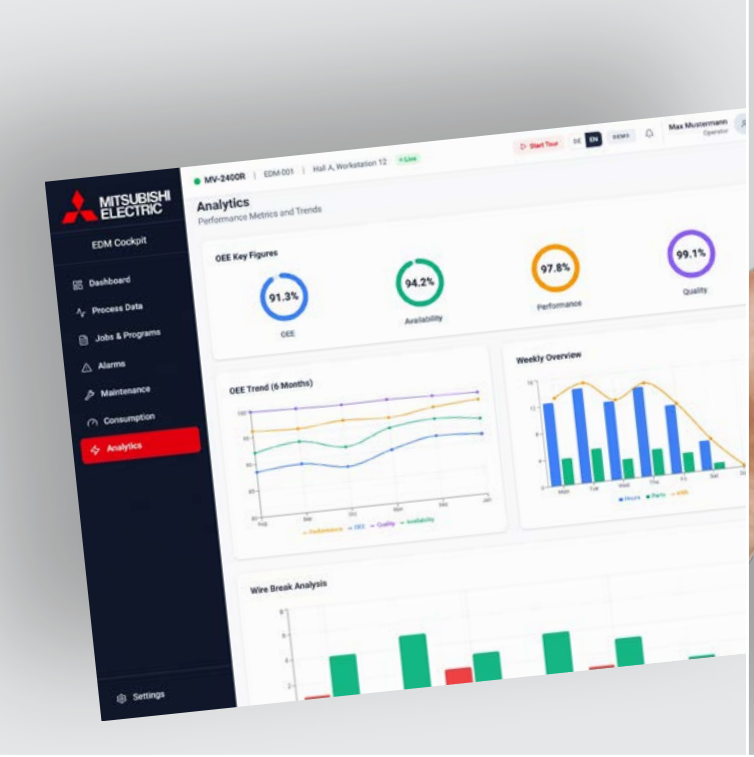
// Digital interfaces

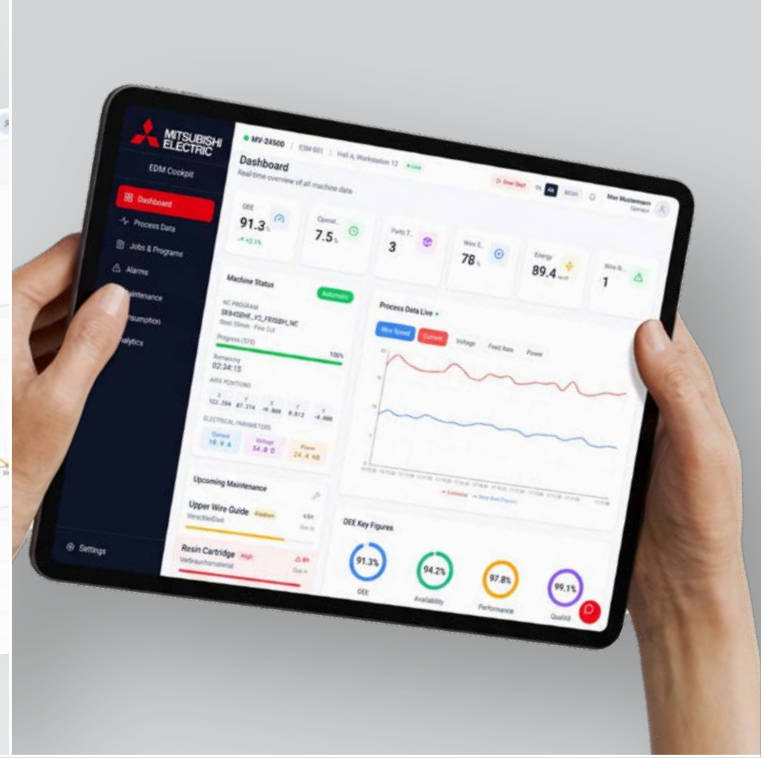
Unlock the value of your data!

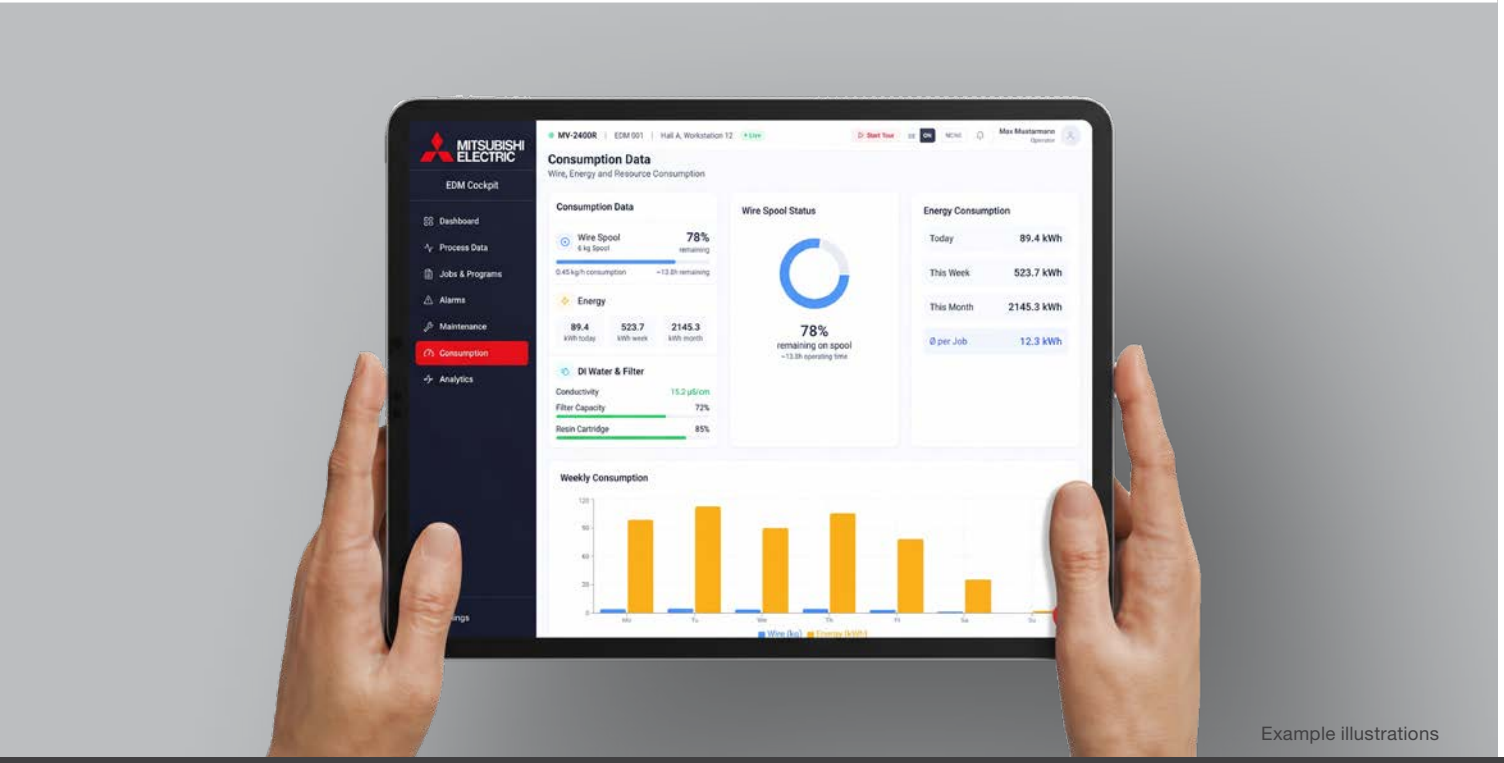
The MG-R creates the basis for connected, data-driven production. Via the OPC UA interface and MTConnect, relevant machine data can be read out easily, integrated into existing systems and evaluated in a targeted manner. This gives you valuable insight into your production processes, allows you to identify optimization potential at an early stage and increases transparency, efficiency and productivity.



Example illustration







Example illustrations

Process data management

An export function for all process data, operating states, consumption data, maintenance states and alarm messages is available as standard. This allows data from several machines to be viewed and evaluated in a consolidated format. Operating and process data can of course also be accessed on the control system.

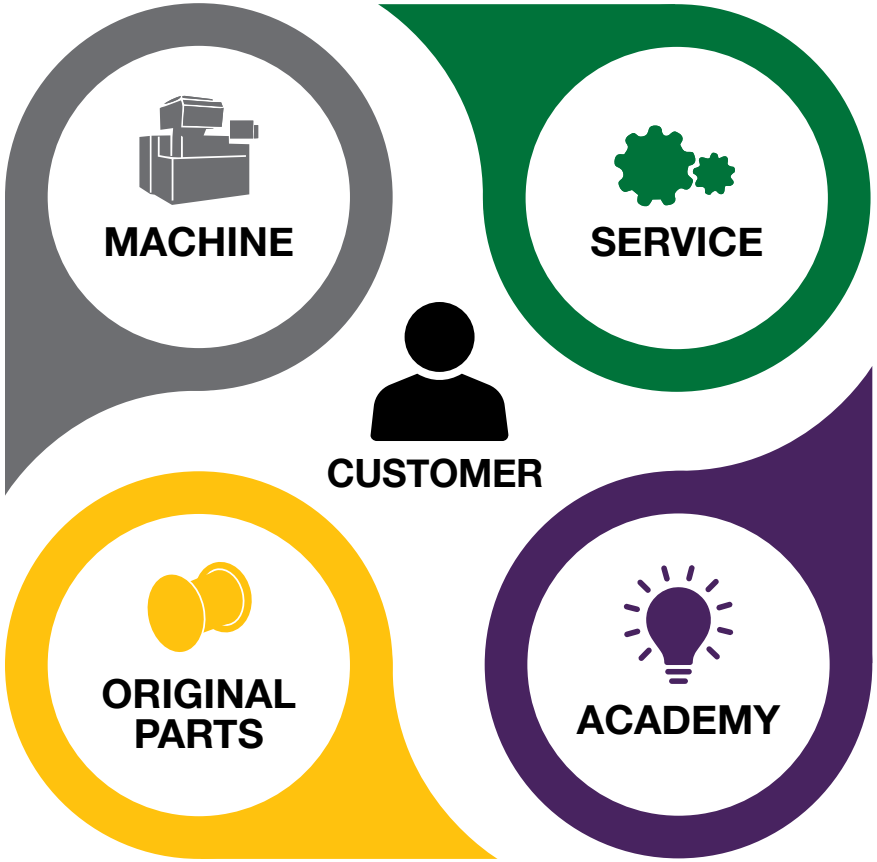
OPC UA and MTConnect

The MG-R provides the foundation for connected, data-driven manufacturing. Using **MTConnect and the optionally available OPC UA interface**, you can easily extract relevant machine data, integrate it into existing systems and analyse it in a targeted manner. This gives you valuable insights into your production processes, enables you to identify optimisation potential at an early stage and improves transparency, efficiency and productivity.

McAfee™

Safety first

Anti-virus protection is provided as standard by one of the world's leading software systems for security control. This ensures that internet connectivity and the use of any Windows operating system remain secure, both today and in the future.



MITSUBISHI ELECTRIC

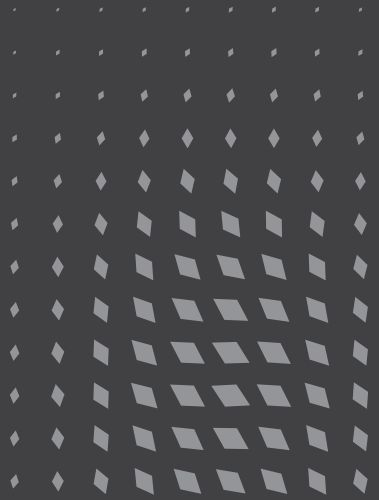
// Changes for the Better – at every stage

Your partner throughout the entire machine life cycle

There is no room for compromise in precision manufacturing: every micrometer counts and every deadline is binding. To help you deliver the precision your customers rely on, Mitsubishi Electric EDM offers more than just machines: you receive the complete performance package. We support you throughout every phase of machine operation with outstanding manufacturer service, high-quality original parts and up-to-date expertise.

Four pillars that make the difference.

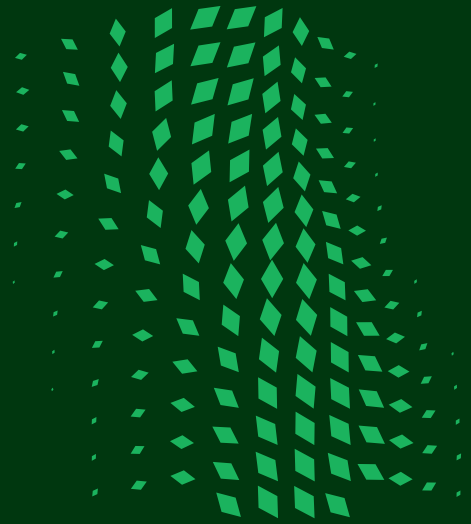
EDM MACHINES



Next-level machines. **Better business.**

Take the next step with us and discover new standards in stability, precision and cost efficiency.

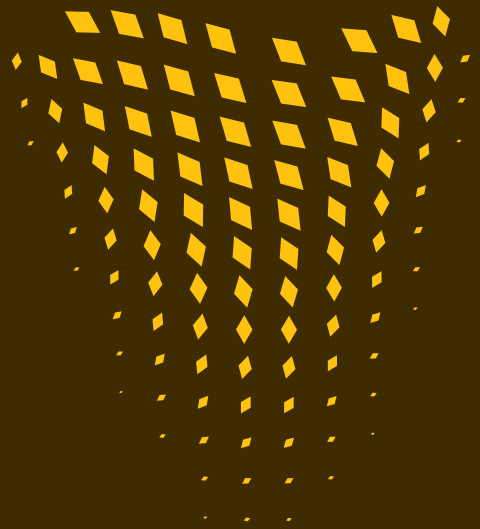
EDM SERVICE



Real people. **Better partnership.**

You have direct access to proven experts who know your machine and can provide competent assistance quickly and directly, remotely or on site.

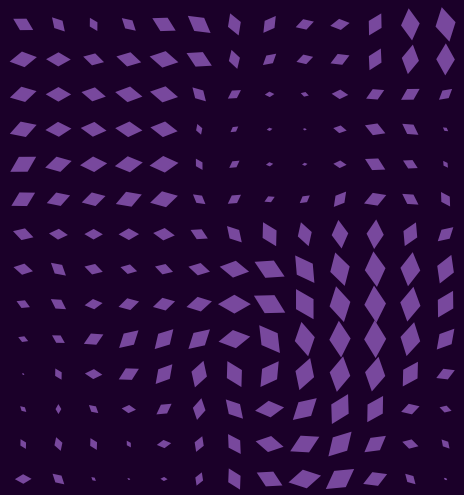
EDM ORIGINALS



Original parts. **Better performance.**

Make sure your machine continues to deliver the performance you invested in, with original parts precisely matched to the manufacturer's specifications.

EDM ACADEMY



More skills. **Better results.**

Practical expert knowledge, available directly and ready to use: learn what your machines are capable of and how to apply this knowledge in practice.



Stephan Münch and Benjamin Werner –
two of our experienced service employees

EDM SERVICE

Real people. **Better partnership.**

// In-house specialists. Online connections. Real solutions.

Contacts who know what they are doing

We can confidently say that our service is among the best in the industry. When you call us, you do not end up in a call center or waiting queue. You speak directly to one of our highly qualified specialists, who can assess your situation and take targeted action because they work with our machines every day and know them inside out.

Thanks to the modern remote technologies mcAnywhere Live and mcAnywhere Service, Mitsubishi Electric technicians can connect to your machines remotely, perform real-time diagnostics and find solutions. If an on-site visit is required, we will be with you quickly. We also offer a range of maintenance services that extend the service life of your machine.

We are here for you – so that you can keep producing.





Reliability you can measure

93%

... in response times and resolution rates: 93% of all service requests are resolved during the initial contact.

mcAnywhere Live

LIVE

Expert view – expert solution:
Minimize costs and downtime with our straightforward, real-time remote diagnostics via smartphone, with no app required. If the problem cannot be solved online, there is no charge. During the warranty period, mcAnywhere Live is always free of charge.

Fast and direct access

Service
hotline: +49 (0) 2102 486 7600
Email: edm.hotline@meg.mee.com

Monday to Friday: 7:30 a.m. to 8 p.m.
Saturday: 9 a.m. to 4 p.m.

Application support
hotline: +49 (0) 2102 486 7700
Email: edm.applikation@meg.mee.com

Monday to Friday: 7:30 a.m. to 4 p.m.

EDM Service
Benefit from EDM Service now!

// mcAnywhere

Work with peace of mind through intelligent solutions

mcAnywhere overcomes boundaries. With mcAnywhere Control and Contact, you can control your machine and keep an eye on your processes wherever you are. With mcAnywhere Service and Live, we also offer first-class remote support.

› mcAnywhere Control+ and Control light

Convenient and secure remote control for your EDM system, powered by TeamViewer. Monitor and control the machine remotely, for example at the weekend. **Control+** includes a tablet PC.

› mcAnywhere Contact+ and Contact light

Anytime, anywhere: direct machine status reports by email keep you up to date at all times. An iPhone is included with **Contact+**.

› mcAnywhere Service

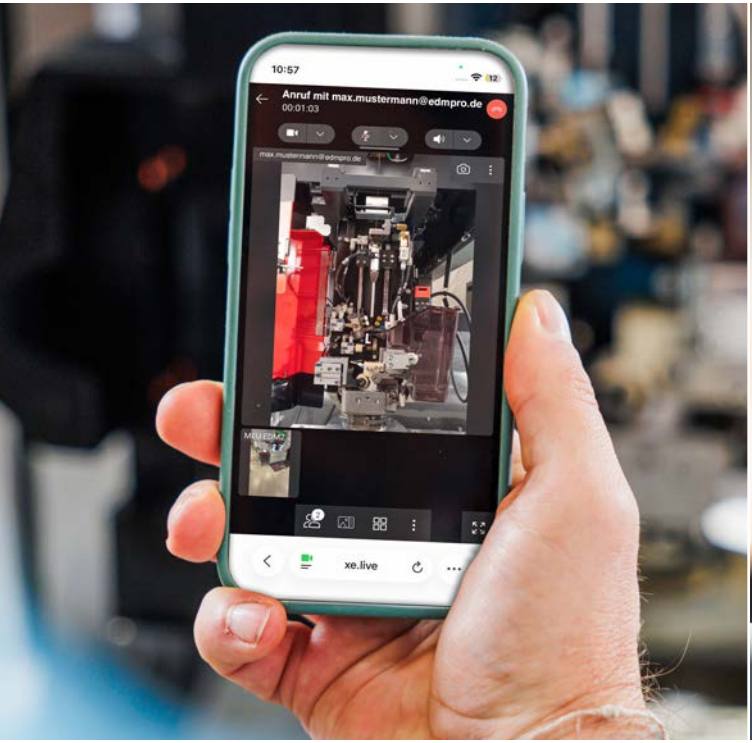
Fast assistance from Mitsubishi Electric hotline experts, thanks to remote access to the control system, via TeamViewer.



mcAnywhere Live:
Expert assistance via smartphone

Go to the video

qr.mitsubishielectric-edm.de/
mcanywhere_live_en







Machines have to keep running ...

Solve machine problems faster than ever with real-time remote diagnostics and no travel-related delays. A Mitsubishi Electric technician examines your machine remotely via camera and solves your problem.

The expert sees it. The expert solves it.

Using state-of-the-art remote technology, mcAnywhere Live enables Mitsubishi Electric technicians to connect to your smartphone, diagnose problems and often solve them in real time. Our employee sees what you see through your smartphone camera. This means faster service, lower costs and immediate resumption of production for your company.

No remote solution – no charge!

You save travel costs, reduce downtime and protect the environment because travel is eliminated altogether. If the problem cannot be solved online, there is no charge. During the warranty period, mcAnywhere Live is always free of charge.



EDM ORIGINALS

Original parts. **Better performance.**

// Precisely matched to your machines, at fair prices

Original parts. Original precision.

There is no need to guess which parts you can trust. Our spare and wear parts are available around the clock in our online shop and have been tested, specified and manufactured to the same high standards as the machine itself. Only Mitsubishi Electric original parts are matched 100% to our machines. Mitsubishi Electric **EDM ORIGINALS** are therefore the simplest way to protect the machine you have invested in. Perfect fit – down to the micrometer.

TIP

Our online shop also offers EDM wire, filters and deionization systems for your Mitsubishi Electric EDM machine, as well as machines from other manufacturers. >>> **www.edmshop.de**



Manufacturer-tested quality

EDM Originals are either original imported parts or parts manufactured in Germany in accordance with development and design specifications. You receive original parts of first-class quality at fair prices.

Reliable spare-parts supply

Around 167,000 parts are kept in stock at our German warehouse at all times. From there, we can meet almost any requirement immediately. On request, your order can be delivered by express service within 24 hours. You can order around the clock at www.edmshop.de.

Protecting your investment

Anyone investing in a Mitsubishi machine wants to protect that investment consistently and secure economical operation throughout the machine's entire life cycle. The best way to do this is with original parts manufactured to the specifications of the machine manufacturer.

EDM Originals
Benefit now!

EDM ACADEMY

More skills.
Better results.



"The expert videos show me how to achieve even better results with the machine. Step by step."

Dominic Janoschka,
Managing Director, Alois Maibaum
Metallbearbeitung GmbH



// Developed by experts. Designed for your success and for expertise that lasts.

Get the most out of your machines with us

Mitsubishi Electric EDM sees itself not only as a machine manufacturer but also as a long-term expertise partner. The **EDM Academy** turns this principle into a practical offering, developed by the same specialists who also handle your service requests. This is not an abstract training program, but proven practical knowledge whose benefits can be felt immediately: your team solves problems more independently and quickly, operating errors decrease and induction times are shortened. Your employees' machine expertise grows.

Your machines can do more – and we would be pleased to show you how.



› Practical knowledge on demand

The **EDM Academy** offers a growing program of short videos covering more than 20 service and application topics: expert knowledge available at any time and ready to be applied directly at the machine.

› Training courses

As a Mitsubishi customer, we train you from A to Z so that you can get the most out of your machine. After purchasing a new machine, you initially receive one week of basic training. Later, you can deepen your knowledge in advanced training courses. On request, we also provide individual training at your company, tailored to your product range.

› Tailored to your team

Use the **EDM Academy** as required, whether for the rapid induction of new employees or the targeted development of your specialists. The range of programs extends to individual training courses tailored precisely to your company's development needs.

› Intensive course for certified EDM specialists

In the four-week intensive course we offer with our partners, your employees are quickly and practically trained to operate state-of-the-art Mitsubishi Electric machines. An efficient alternative to lengthy recruitment processes!

Find out more!
mitsubishielectric-edm.eu/compact-training-to-become-a-certified-erosion-specialist

› User Days (workshops)

At least once a year, we welcome machine operators to the popular User Days in Ratingen near Düsseldorf. The wide range of topics includes application technology tips and tricks, simple and fast programming and correct machine maintenance.

EDM Academy
Benefit now!

Technical data





	MG12R	MG24R
Travel (X / Y / Z), mm	400 / 300 / 220	600 / 400 / 310
Travel (U / V), mm	120 / 120 (+/- 60)	150 / 150 (+/- 75)
Max. taper angle (°), related to max. workpiece height for taper cuts (mm)	15 / 200 30 / 87	15 / 260 30 / 110
Max. workpiece dimensions (W x D x H), mm	810 x 700 x 215	1050 x 820 x 305
Max. workpiece weight, kg	500	1500
Table dimensions (W x D), mm	640 x 540	840 x 640
Table design	Hardened four-sided frame table	Hardened four-sided frame table
Available wire diameters, mm	0.1 – 0.3	0.1 – 0.3
Wire-spool capacity, kg	10	10
Automatic wire threading / wire chopper	Yes / Yes	Yes / Yes
Overall dimensions (W x D x H), mm	2025 x 2760 x 2015	2687 x 3030 x 2150
Machine weight, kg	2700 (including tank)	3500
Power supply	3-phase, 400 V / AC ± 10%, 50/60 Hz, 13 kVA	3-phase, 400 V / AC ± 10%, 50/60 Hz, 13 kVA

Filtration system		
Tank capacity, l	550	860
Filter fineness, µm / number of filter elements	3 / 2	3 / 2
Temperature control	Dielectric cooling unit	Dielectric cooling unit
Weight without filling, kg	Included in machine weight	350

MG-R series

Generator	
Power unit	Regenerative, transistor-controlled pulse generator
Cooling method	Fully sealed / indirect air cooling
Max. machining current, A	50
Dimensions (W x D x H), mm	600 x 650 x 1765
Weight, kg	240

Control system	
Input options	Keyboard, USB stick, Ethernet, 19-inch multi-touch display
CNC system	CNC, closed-loop control
Min. command increment (X / Y / Z / U / V), µm	0.1
Min. axis resolution, µm	0.05

Equipment	
Tubular drives with linear scales (X / Y / U / V)	Yes
Control system M800 with 19-inch multi-touch display	Yes
Hand pilot with configurable LCD monitor	Yes
Automatic vertical front sliding door	Yes
Digital AE II generator	Yes
Digital power meter / filter pressure sensor	Yes
Ethernet / DNC / FTP	Yes
MTConnect / OPC UA (optional)	Yes
Operating data output, Mitsubishi format	Yes
Automation preparation	Optional
McAfee AntiVirus embedded	Yes
XEDM on board	Yes
Corehold technology	Yes
Scheduler	Yes
Sleep mode	Yes
UFS fine-finishing generator	Yes

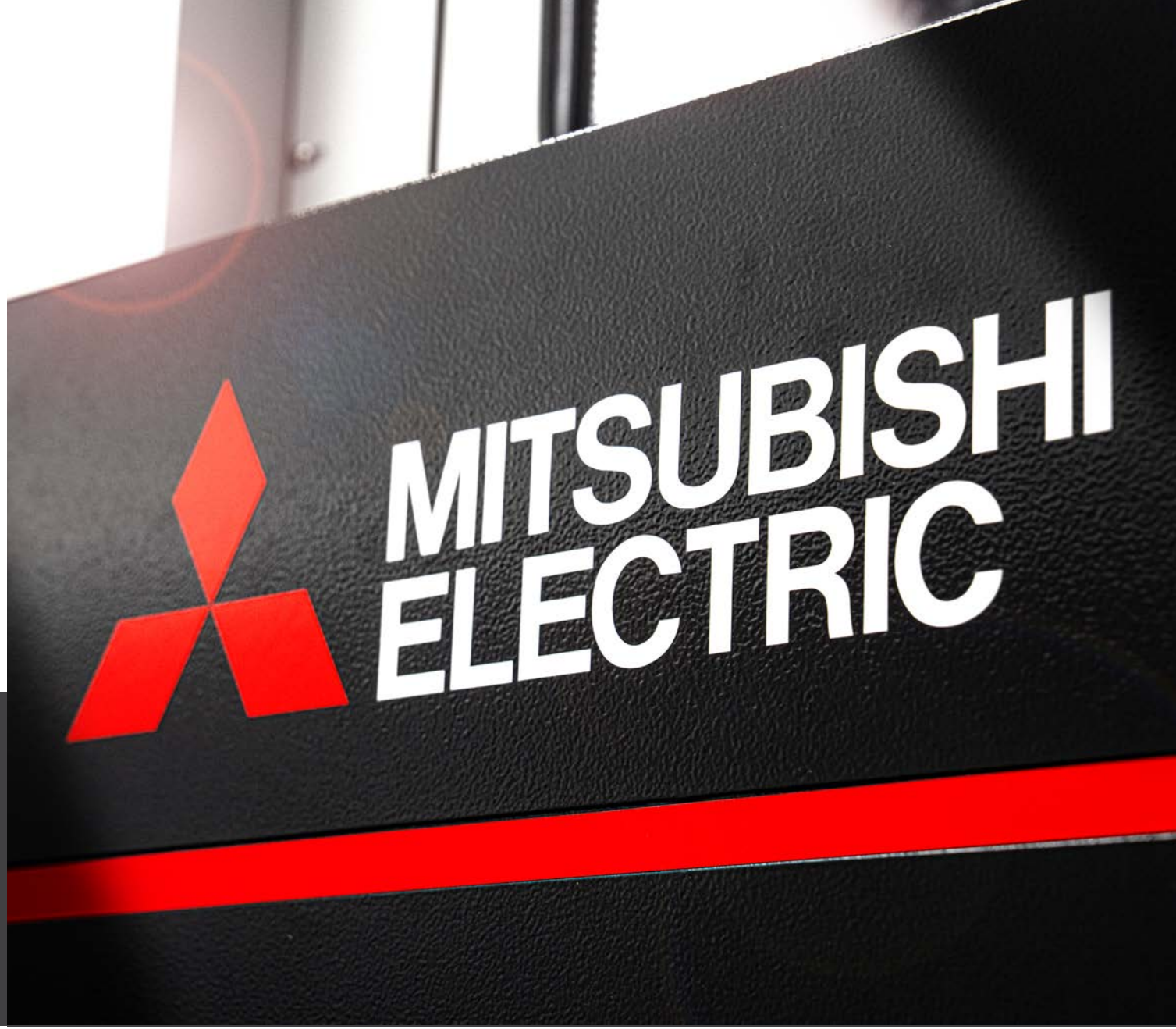
Optional hardware	
Fine-wire specification 0.05 / 0.07 mm	Option, cannot be retrofitted
Wire station for 20 / 25 kg wire spools	Option
Angle Master Advance II – basic kit (software and wire-alignment device)	Option
Angle Master Advance II – wire-guide set	Option
Automatic Renishaw probe on quill	Option
ERGO-LUX LED floodlight	Option
Three-color signal lamp	Option
Automatic water replenishment	Option
Connection to external chiller	Option
External signal output with relay board	Option

Tools	
mcAnywhere Service	Yes
mcAnywhere Control (TeamViewer)	Option
mcAnywhere Contact	Yes
Tool Package / automation solutions	Option / option

Ready for the next level of wire-EDM?

You now know the benefits of the MG-R. What matters, however, is what it can do for your production. Let us talk together about your requirements, your ideas and your business case.

Together, we will find out how to make your production future-proof in an increasingly global competitive environment and how to strengthen your competitive position sustainably.



Arrange an appointment with us!

Our sales team will be happy to advise you.
Tel. +49 (0) 2102 486-6120
Email edm.sales@meg.mee.com
Web www.mitsubishielectric-edm.eu

MITSUBISHI ELECTRIC EUROPE B.V.
GERMAN BRANCH, MITSUBISHI-ELECTRIC-PLATZ 1, D - 40882 RATINGEN

MITSUBISHI ELECTRIC
Changes for the Better