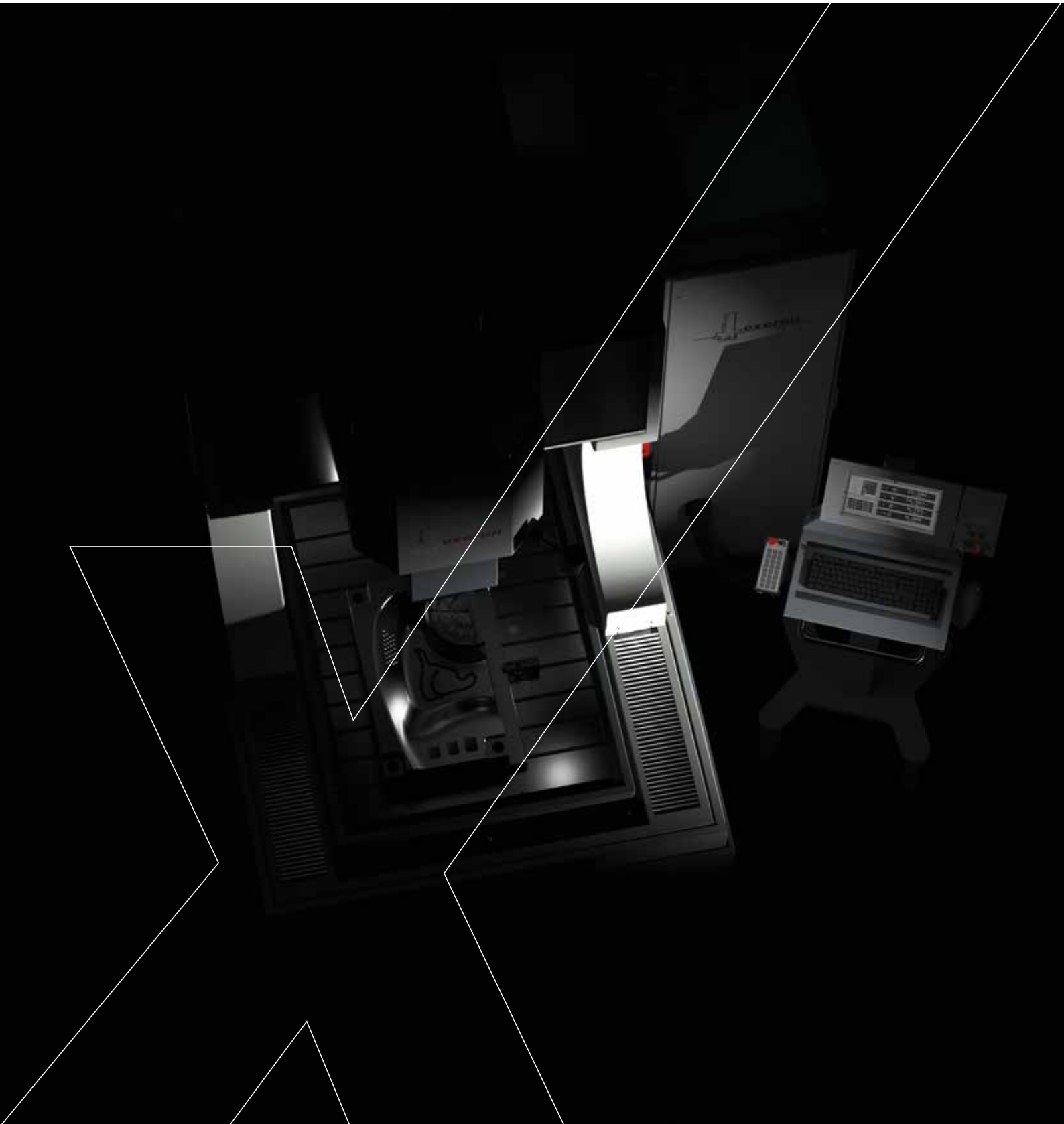
exeron
EXPERTS IN EDM + HSC

EDM GENERAL OVERVIEW

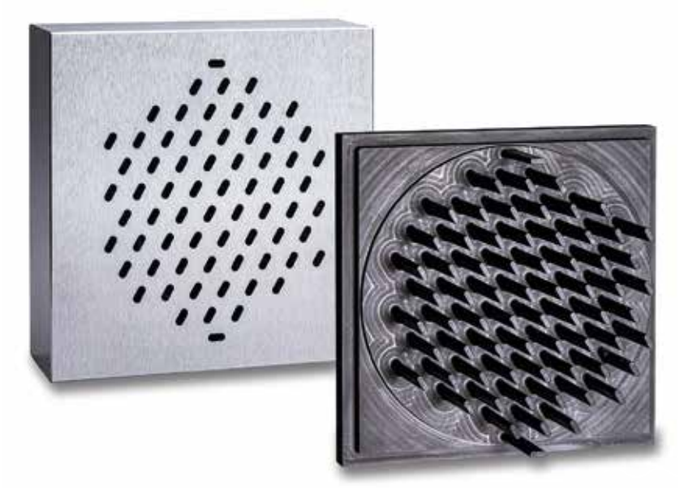


HIGH-END ERODING WITH EXERON

Pioneering eroding technology has a name: exeron. Our EDM series impresses with maximum efficiency, absolute precision and excellent quality in the machining of workpieces. With each machine you translate our passion for innovative solutions and technological progress into productive results. Our development is geared towards the varying requirements of our customers. Whether proven standard solutions or special customer-specific applications – our EDM series fulfils all requirements. Comprehensively thought through and automatable.

A love of innovation and more than 40 years of experience make the difference. On this basis, we develop machines that give you clear advantages on the market. With exeron you have a strong partner in various areas in the world of eroding. Our EDM series covers a wide spectrum: from compact systems with a small footprint for microerosion in areas such as electronics and medical equipment to impressively powerful gantry systems with excellent accessibility. For even more efficiency and productivity in your tool and mould making. Designed and made in Germany.

SAMPLE PARTS



EDM 310

Small, integrated, highly dynamic:
We developed the EDM 310 specifically for microerosion in areas such as electronics and medical equipment. All process-relevant systems and units are permanently integrated, which reduces the space required for installation.

- FEM-optimised, one-piece machine base frame made from mineral cast for maximum stability
- Minimal footprint thanks to the integration of all process-relevant systems and units
- Digital AC servo direct drives and glass scales for maximum travel and control dynamics in all axes
- Lowerable tank, movable when filled for unhindered access to the workpiece
- Fully simultaneous, PC-based CNC path control MF30 with Windows operating system
- High-power exogen generator technology
- Connection to different automation systems possible

EDM 310	
Travelling distances X x Y x Z	350 x 270 x 270 mm
Machine table	550 x 350 mm
Tank	770 x 520 mm
Distance table/quill min./max.	160/430 mm
Electrode weight max.	25 kg
Workpiece weight max.	500 kg
Fill level of tank	300 mm
Total dimensions (W x D x H)	2,040 x 1,600 x 2,610 mm
Generator current	60 A
Mains connection	400 V, three phase, 50 (60) Hz
Power consumption without cooling unit	6 kVA

EDM 312

Robust, compact, versatile:
The EDM 312 is the ideal machine for universal applications. Despite its remarkably compact dimensions, it is also suitable for larger loads on the Z-axis.

- Minimal footprint thanks to the integration of all process-relevant systems and units
- Digital AC servo direct drives and glass scales for maximum travel and control dynamics in all axes
- Lowerable tank, movable when filled for unhindered access to the workpiece
- Fully simultaneous, PC-based CNC path control MF30 with Windows operating system
- High-power exogen generator technology
- Connection to different automation systems possible
- Recessed table chuck possible

EDM 312	
Travelling distances X x Y x Z	450 x 300 x 300 mm
Machine table	820 x 400 mm
Tank	900 x 520 mm
Distance table/quill min./max.	150/450 mm
Electrode weight max.	30/150 kg
Workpiece weight max.	800 kg
Fill level of tank	300 mm
Total dimensions (W x D x H)	2,160 x 2,000 x 2,610 mm
Generator current	60 A
Mains connection	400 V, three phase, 50 (60) Hz
Power consumption without cooling unit	6 kVA

EDM 313

Compact, fast, highly stable.
The EDM 313 impresses with its unbeatable ratio of travel distances to footprint. It is extremely stable, yet offers excellent dynamics.

60A

mm/inch

- FEM-optimised, one-piece machine base frame made from mineral cast for maximum stability
- Minimal footprint thanks to the integration of all process-relevant systems and units
- Digital AC servo direct drives and glass scales for maximum travel and control dynamics in all axes
- Lowerable tank, movable when filled for unhindered access to the workpiece
- Fully simultaneous, PC-based CNC path control MF30 with Windows operating system
- High-power exogen generator technology
- Connection to different automation systems possible
- Recessed table chuck possible

EDM 313	
Travelling distances X x Y x Z	620 x 420 x 400 mm
Machine table	1,000 x 600 mm
Tank	1,070 x 670 mm
Distance table/quill min./max.	160/560 mm
Electrode weight max.	50/250 kg
Workpiece weight max.	1,500 kg
Fill level of tank	400 mm
Total dimensions (W x D x H)	2,530 x 2,470 x 2,520 mm
Generator current	60 A/120 A
Mains connection	400 V, three-phase, 50 (60) Hz
Power consumption without cooling unit	8 kVA/10 kVA

EDM 314

Powerful, flexible, ergonomic:
The EDM 314 scores with its superior accessibility from three sides and from above. Large travel distances with no loss of stability is another advantage. The drive is located at the machine's centre of gravity for maximum rapid traverse.

60A
120A

mm/inch

- FEM-optimised, one-piece machine base frame in a hybrid construction for maximum stability
- Integrated dielectric device with automatic cooling for constant operating conditions
- Digital AC servo direct drives and glass scales at the machine's centre of gravity for maximum travel and control dynamics in all axes
- Lowerable tank, movable when filled for unhindered access to the workpiece as well as short filling and emptying times
- Fully simultaneous, PC-based CNC path control MF30 with Windows operating system
- High-power exogen generator technology
- Connection to different automation systems possible

EDM 314	
Travelling distances X x Y x Z	900 x 700 x 450 mm
Machine table	1,150 x 850 mm
Tank	1,200 x 900 mm
Distance table/quill min./max.	260/710 mm
Electrode weight max.	50/500 kg
Workpiece weight max.	3,000 kg
Fill level of tank	500 mm
Total dimensions (W x D x H)	2,330 x 3,450 x 3,260 mm
Generator current	60 A/120 A
Mains connection	400 V, three-phase, 50 (60) Hz
Power consumption without cooling unit	8 kVA/10 kVA

EDM 316

Big, strong, ergonomic:
The EDM 316 is the large gantry machine for correspondingly sized machining tasks. Despite its size, the machine is perfectly accessible and features a tank that can be moved when filled.

- FEM-optimised, one-piece machine base frame in a hybrid construction for maximum stability
- Integrated dielectric device with automatic cooling for constant working conditions (optional: backflush filter)
- Digital AC servo direct drives and glass scales at the machine's centre of gravity for maximum travel and control dynamics in all axes
- Lowerable tank, movable when filled for unhindered access to the workpiece as well as short filling and emptying times
- Fully simultaneous, PC-based CNC path control MF30 with Windows operating system
- High-power exogen generator technology
- Optimal ratio of travel distances to footprint
- Connection to different automation systems possible

EDM 316	
Travelling distances X x Y x Z	1,500 x 1,180 x 800 mm
Machine table	1,750 x 1,350 mm
Tank	1,800 x 1,400 mm
Distance table/quill min./max.	220/1,020 mm
Electrode weight max.	50/500 kg
Workpiece weight max.	8,000 kg
Fill level of tank	750 mm
Total dimensions (W x D x H)	2,830 x 4,760 x 4,150 mm
Generator current	60/120 A
Mains connection	400 V, three-phase, 50 (60) Hz
Power consumption without cooling unit	12 kVA/14 kVA

EDM 316 XXL

Giant, strong, ergonomic:
When really big is still too small, the EDM 316 XXL fits the bill. It masterfully solves even the biggest of machining tasks and impresses with excellent accessibility despite its size.

- FEM-optimised, one-piece machine base frame in a hybrid construction for maximum stability
- Integrated dielectric device with automatic cooling for constant working conditions (optional: backflush filter)
- Digital AC servo direct drives and glass scales at the machine's centre of gravity for maximum travel and control dynamics in all axes
- Lowerable tank, movable when filled for unhindered access to the workpiece as well as short filling and emptying times
- Fully simultaneous, PC-based CNC path control MF30 with Windows operating system
- High-power exogen generator technology
- Optimal ratio of travel distances to footprint
- Connection to different automation systems possible

EDM 316 XXL	
Travelling distances X x Y x Z	2,000 x 1,180 x 800 mm
Machine table	2,500 x 1,350 mm
Tank	2,550 x 1,400 mm
Distance table/quill min./max.	220/1,020 mm
Electrode weight max.	50/500 kg
Workpiece weight max.	8,000 kg
Fill level of tank	750 mm
Total dimensions (W x D x H)	2,830 x 6,070 x 4,150 mm
Generator current	60/120 A
Mains connection	400 V, three-phase, 50 (60) Hz
Power consumption without cooling unit	12 kVA/14 kVA

AVAILABLE OPTIONS

exogen generator

Compact, process-oriented
60 A exogen generator

Optional 120 A generator

Cooling

Heat exchanger for connection to
external cooling unit

Optionally with integrated
cooling unit

Filter system

Cartridge filter system with
disposable cartridges

Optional environmentally-friendly
backflush filter system

C-axis

C-axis for high-precision position-
ing, simultaneous machining and
permanent rotation

Optionally with C-axis bridging for
holding large, heavy electrodes

Ergonomic control panel

Ergonomically designed control panel

Optional mobile control panel

Regionalisation

Selectable operating language
Measurement system in mm or inch

Fire protection

CO_2 fire extinguishing system
for automated 24/7 operation

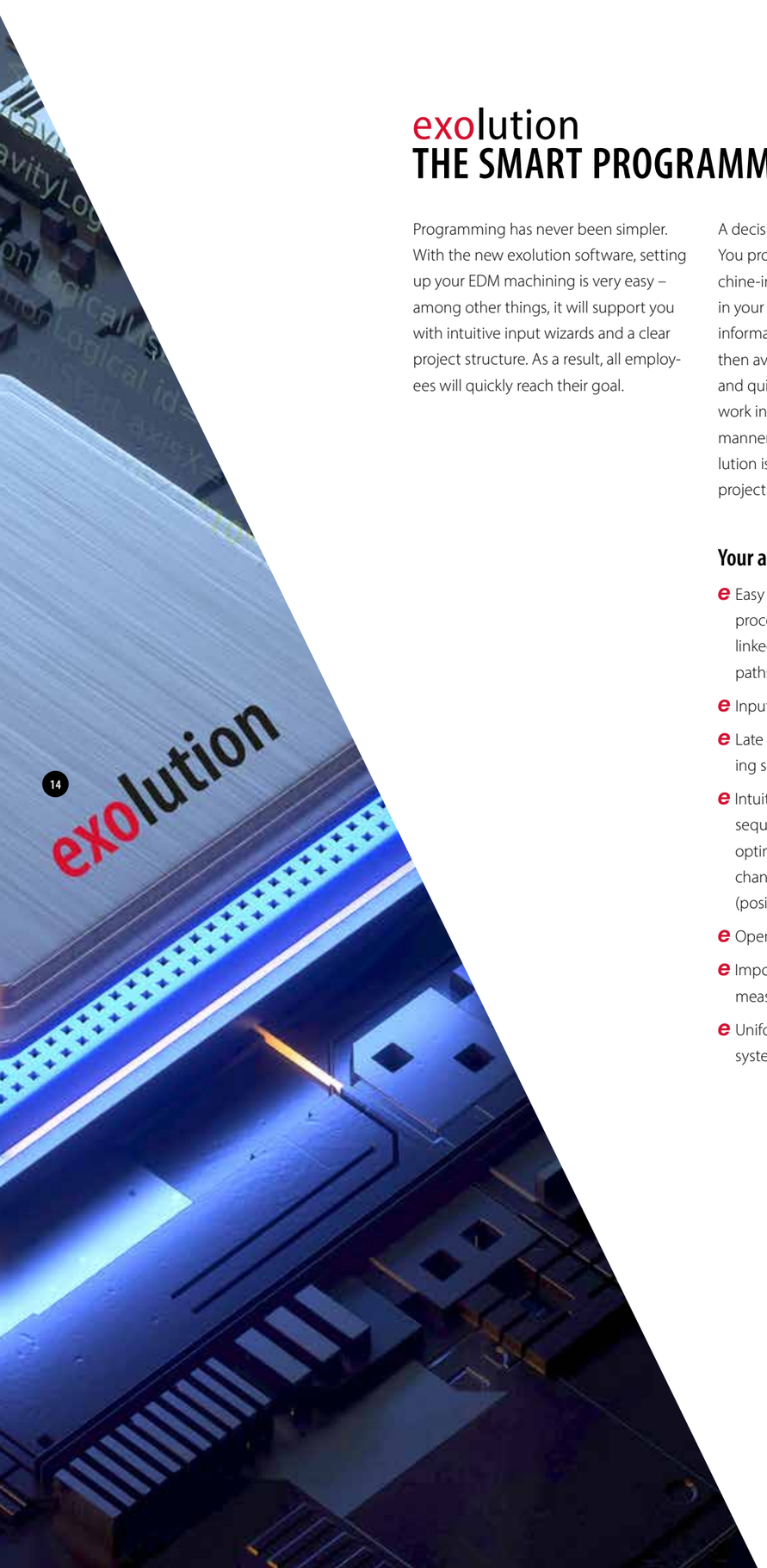
CHALLENGE US!

Customer solutions

Every order is different. State-of-the-art machines from exeron enable you to optimally fulfil your customers' requirements. We often find that the right solution already exists in our standard range – with some minor adjustments, if necessary. In case of more complex requirements, our technical expertise is an unbeatable advantage: We will develop the ideal machine for your eroding tasks together with you. Your need, our consultancy service and our specialist know-how are guaranteed to lead to success. If you have any questions, please contact our Application Technology and Service departments directly. Our experts are your problem solvers. From the design to the start of production and ongoing operation.

Customer-specific solution:

Erosion of an impeller on an EDM machine with additional C-axis on the clamping plate. Even the most complex workpieces can be produced in a single clamping operation thanks to simultaneous machining with all 5 axes.



exolution
THE SMART PROGRAMMING SOLUTION

Programming has never been simpler. With the new exolution software, setting up your EDM machining is very easy – among other things, it will support you with intuitive input wizards and a clear project structure. As a result, all employees will quickly reach their goal.

A decisive advantage of exolution: You program the system using the machine-independent software from the PC in your office and can, for example, import information from CAD systems, which is then available to the machine. The peace and quiet of your office enables you to work in a more relaxed and focussed manner than in the production hall. exolution is the smart solution for your EDM projects.

Your advantages:

- Easy programming of complex erosion processes such as undercuts, interlinked cycles (extended cavity) and paths via graphic dialogues
- Input wizards for creating projects
- Late technology lock-in before machining specific to the respective machine
- Intuitive strategy definition for the sequence of work steps (oscillation, optimised for tool and/or workpiece changes) and electrode distribution (positions, machining steps)
- Open CAD import interface
- Import interface for offset data from measuring machines
- Uniform interfaces to job management systems

MF30
THE INTUITIVE OPERATING SOFTWARE

Head for success with the MF30: The CNC control technology developed by exeron impresses with a user-friendly, well-proven operating concept that is optimally tailored to your requirements. As is the case with all our in-house developments, exeron has drawn on the experiences that we have gained over many years together with our customers.
You too will be delighted with our self-explanatory, thoughtfully designed Windows-based operating software. The choice of controlling device is up to you: You can operate your system using a touchscreen, keyboard or trackball mouse. In terms of control technology, our MF30 satisfies any need, as you can work with up to 8 axes simultaneously. Extensive probe cycles as well as a database for selecting the technology to meet the latest requirements are a given. The programming can be done both in the CNC block and menu-driven.

Keyword flexibility: The MF30 offers a multitude of configuration options. If necessary, exeron's Application Technology department can quickly develop a customer-specific solution for very special applications.
Talk to us for more information.

exogen
THE POWER PLANT FOR YOUR EROSION PROCESS

Based on a completely new power source design, exogen represents the current benchmark in generator technology for eroding machines. This in-house development sets new standards in terms of performance, precision and ease of use – here you benefit from our many years of experience and our innovative strength. Equally groundbreaking is the exogen's compact, fully encapsulated construction. In this way, we eliminate external influences and contamination. Thanks to the integrated cooling unit, the generator achieves even better heat dissipation.
A key distinguishing feature: The exogen is a machining all-rounder.

This generator will enable you to achieve optimal results in the machining of a wide variety of workpiece materials using electrodes made of copper, graphite, copper-tungsten and other materials.
The selection of machining technology is database-driven and based on various parameters – a significant step towards Industry 4.0 in vertical erosion.
This is also idea for special requirements such as polishing erosion. You will be thrilled with the achievable surface quality as well as the associated low electrode wear.

With the active current shaping of the erosion impulses, the generator fulfils the growing technological requirements of our customers. This is a clear competitive advantage as it enables you to reduce electrode wear during machining and achieve maximum shaping accuracy.
Existing customers can benefit from this too: Older exeron machines can also be retrofitted with the exogen.

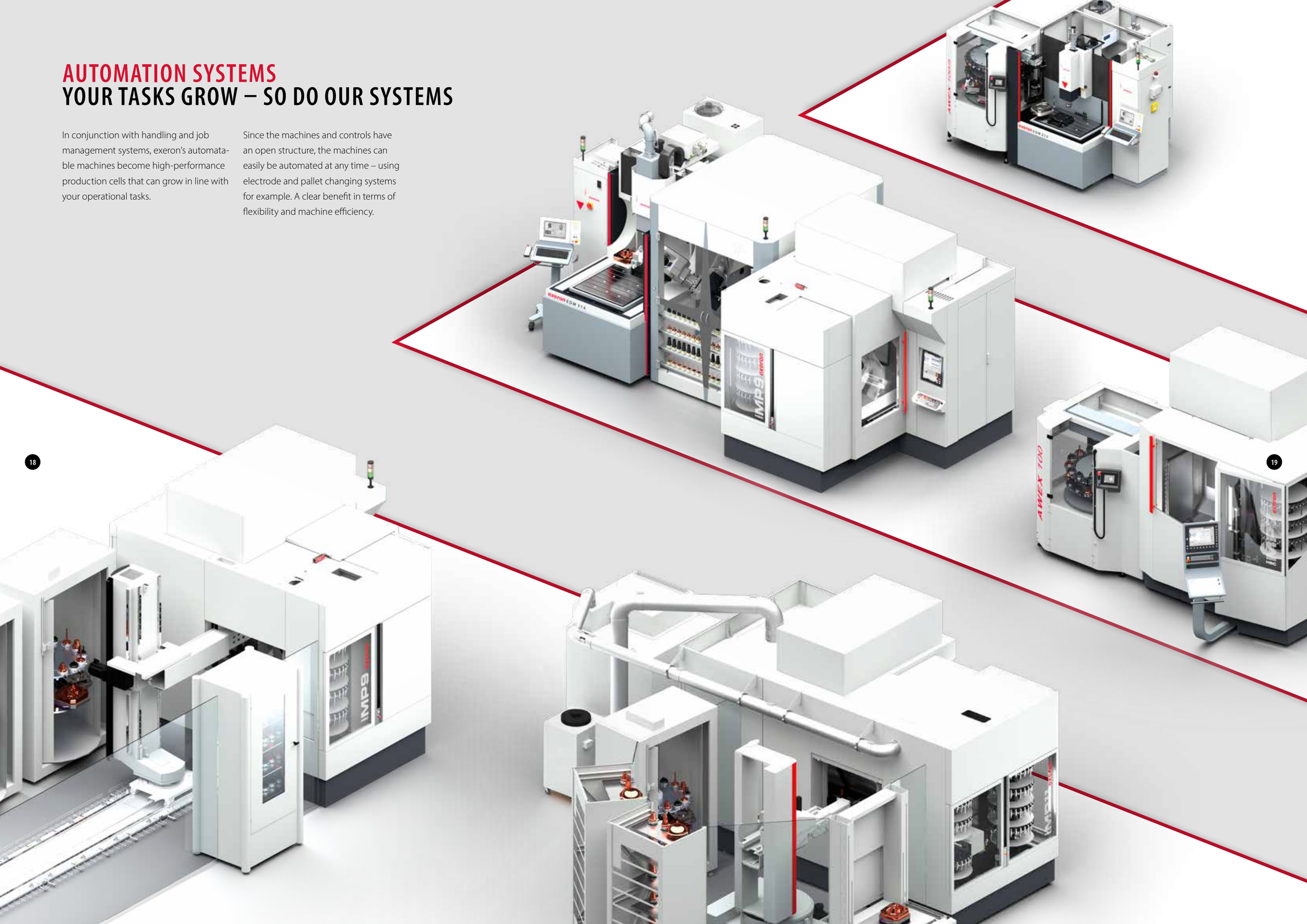
OUR APPLICATION TECHNOLOGY
CONVINCING COMPETENCE

You are dealing with a difficult task and seek a competent partner. This where our application technology experts come into play – they love a challenge. They will seek the ideal solution and the optimum eroding machine to enable you to machine workpieces efficiently and economically. With their extensive know-how, our Application Technology department is the link between Development and customers. Our specialists combine individual consultation, in-depth specialist knowledge and long-time experience to provide comprehensive problem-solving expertise. They will develop and test new technologies and controls for you and incorporate the latest market requirements into our machines.
In any case, our application technology experts also act out of conviction in the best possible sense: They will help you to utilise the full capability of our systems. In the process, they will develop customer-specific solutions together with you if necessary. Challenge us. We will gladly carry out a trial machining run with your workpiece because we know that the decision to opt for one of our innovative machines will be an easy one. We will be supported by a modern measuring centre that attests to the high machining precision and simultaneously fulfils our high quality requirements.
Have we convinced you? Then we look forward to starting a cooperative partnership. We will guide you through the commissioning of your new exeron machine, support you with tailored operator training and advanced courses for maximum production success and answer any questions you may have at any time during ongoing operation. We are there for you when you need us.

AUTOMATION SYSTEMS
YOUR TASKS GROW – SO DO OUR SYSTEMS

In conjunction with handling and job management systems, exeron's automatable machines become high-performance production cells that can grow in line with your operational tasks.

Since the machines and controls have an open structure, the machines can easily be automated at any time – using electrode and pallet changing systems for example. A clear benefit in terms of flexibility and machine efficiency.



EXERON SALES PARTNERS AROUND THE WORLD

We speak your language. We mean this literally and figuratively. Because we are present worldwide, you can always expect competent employees from your country, who understand you perfectly as a native speaker. As well as the concerns or problem you are dealing with.

Wherever you are, we are close at hand. With service locations and showrooms where you can see our EDM and HSC machines and experience them at first hand. That is exactly what you want! You see, we understand each other.

EXERON EUROPE

THE EDM LINE

We will gladly provide you with an overview of all exeron vertical eroding machines. You can find all the relevant details here and thus make a direct comparison. Technical changes that serve to further develop our machines may lead to deviations of individual parameters.

Do you have any further questions – about special requirements or the implementation of individual specifications, for example? Then get in touch! Our experts will be happy to advise you. We look forward to talking to you.

Made in Germany

	EDM 310	EDM 312	EDM 313
Travelling distances X x Y x Z	350 x 270 x 270 mm	450 x 300 x 300 mm	620 x 420 x 400 mm
Machine table	550 x 350 mm	820 x 400 mm	1,000 x 600 mm
Tank	770 x 520 mm	900 x 520 mm	1,070 x 670 mm
Distance table/quill min./max.	160/430 mm	150/450 mm	160/560 mm
Electrode weight max.	25 kg	30/150 kg	50/250 kg
Workpiece weight max.	500 kg	800 kg	1,500 kg
Fill level of tank	300 mm	300 mm	400 mm
Total dimensions (W x D x H)	2,040 x 1,600 x 2,610 mm	2,160 x 2,000 x 2,610 mm	2,530 x 2,470 x 2,520 mm
Generator current	60 A	60 A	60 A/120 A
Mains connection	400 V, three phase, 50 (60) Hz	400 V, three phase, 50 (60) Hz	400 V, three-phase, 50 (60) Hz
Power consumption without cooling unit	6 kVA	6 kVA	8 kVA/10 kVA

	EDM 314	EDM 316	EDM 316 XXL
Travelling distances X x Y x Z	900 x 700 x 450 mm	1,500 x 1,180 x 800 mm	2,000 x 1,180 x 800 mm
Machine table	1,150 x 850 mm	1,750 x 1,350 mm	2,500 x 1,350 mm
Tank	1,200 x 900 mm	1,800 x 1,400 mm	2,550 x 1,400 mm
Distance table/quill min./max.	260/710 mm	220/1,020 mm	220/1,020 mm
Elektrodengewicht max.	50/500 kg	50/500 kg	50/500 kg
Workpiece weight max.	3,000 kg	8,000 kg	8,000 kg
Fill level of tank	500 mm	750 mm	750 mm
Total dimensions (W x D x H)	2,330 x 3,450 x 3,260 mm	2,830 x 4,760 x 4,150 mm	2,830 x 6,070 x 4,150 mm
Generator current	60 A/120 A	60/120 A	60/120 A
Mains connection	400 V, three-phase, 50 (60) Hz	400 V, three-phase, 50 (60) Hz	400 V, three-phase, 50 (60) Hz
Power consumption without cooling unit	8 kVA/10 kVA	12 kVA/14 kVA	12 kVA/14 kVA

Technical details subject to change

exeron
EXPERTS IN EDM + HSC

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exeron combines EDM and HSC competence to sustainable success for its customers and offers this as a manufacturer of efficient, reliable and durable eroding machines (EDM) and high-speed milling machines (HSC) as well as handling systems (automation) "Made in Germany". exeron stands for professionalism, quality, customer orientation, flexibility and service competence.

Made in Germany

We reserve the right to make design changes and other changes to technical data and performance features insofar as they serve technical progress, mistakes, printing, calculation, writing and calculation errors.

Status: EDM_09_2021_Rev_1_en