

ONA IRIS

IRIS RANGE CATALOGUE
DIE-SINKING



\ Connect
\ Simulate
\ Win



ONA IRIS

IRIS RANGE CATALOGUE
DIE-SINKING

ONA IRIS

THE REVOLUTION IN EDM ARRIVES.

To have control.

And have it based on a unique experience of connectivity that improves the usability of the equipment. Visualising the machining process before executing the program to be able to simulate reality, make changes and manipulate it in a tactile way, and even modify the sequences quickly and accurately.

Essentially revolutionising the way EDM is carried out to obtain more profitable and 100% successful results.

That's ONA IRIS.

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ONA, POSSIBLY THE WORLD'S BEST EDM CHOICE.

At ONA we are pioneers in EDM technology. 70 years of history have made us the most specialised manufacturer in the world. With ONA, the client is guaranteed a highly qualified team, experts in the manufacture of EDM machines and precision assemblies. A history full of technological advances and improvements with over 15,000 machines installed all over the world. We are present in 60 countries thanks to a wide network of distributors around the world ensuring fast and efficient service at any time.

70

years of experience.

60

countries.

100%

manufactured in Europe.



EUROPEAN TECHNOLOGY

guaranteeing
maximum reliability.



98%

overall effectiveness
of the equipment.

15.000

machines installed.





PEOPLE

An expert team of specialists focused on your needs. Working hand in hand, with the diligence and flexibility you require and with the expertise and precision that more than 70 years in the world of EDM give us.

ONA IS HUMAN CAPACITY.

TECHNOLOGY

Everything that comes with being pioneers in EDM, more than 70 years of experience and our commitment to developing our own technology, have enabled us to always provide you with the perfect and most profitable solution for your project. Our secret: combining the expertise of our two key departments; applications and R&D&i.

ONA IS TECHNOLOGICAL CAPACITY.

PROFITABILITY

Yes, we give you the solution you need, but we strive to also make it the most profitable solution. Your success and long-term profitability is the cornerstone of each one of our proposals; offering you the most reliable solution with the highest profitability.

ONA OPTIMISES YOUR INVESTMENT.

Profitability

People



PROFITABILITY

Technology

ONA IRIS CONNECT

\\ Safety
\\ Connectivity
\\ Productivity

A COMPLETE AND UNIQUE CONNECTION

Continuously updated functionalities that allow us to connect with the needs of the market and customers in a unique way.

ONA IRIS offers an unprecedented integration of user-oriented digital tools to make projects easy to manage. Its tools include improvements in terms of data transmission and download, external connections, safety, integration with other software and remote process management.

CONNECT +Safety

DIGITAL TOOLS THAT MAKE THE EXPERIENCE SAFER...

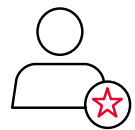
Protect the sensitive information of your project

SECURITY PACK.

We design customised solutions for the client's specific needs, such as our Security Pack: A protection system to guarantee the security of the company's sensitive information. A system for creating an administrator, configuring different profiles, limiting deletion or modification of hours.

The most efficient way to protect our businesses by preventing data loss. The Security Pack creates two levels of user: **restricted user** and **supervisor user**.

THE SUPERVISOR USER.



has complete control on the machine. It has the same accessibility as the user of the machines without the Security Pack. This user can also decide which limitations will be applied to the restricted user.

THE RESTRICTED USER.



has its control on the machine limited by the supervisor. He can have some restrictions in the creation and modification of files and tables, the access to the pen drive, the modification of the settings parameters, work area, e-mail settings, Plant Monitor access and change of the execution modifiers, as well as the transfer of files via serial line. The restricted user cannot install new versions.

CONNECT

+Connectivity

IoT ready, possibility to connect to other devices or platforms complying with Industry 4.0 standards.

Network connectivity and operation. Ethernet connector, standard TCP/IP communication.

Different M2M connection options.

File transmission via FTP and FTPS.

Integration with main CAD/CAM software for simulation and automatic generation of programs.

The CNC incorporates a control and monitoring server which allows data and services to be delivered to external clients via XML.

Store data securely in the cloud and in a local environment.



INDUSTRY 4.0

The ONA IRIS range of machines incorporates all the advances that come with Industry 4.0.

ONA IRIS puts at your disposal all the digital tools that will provide you with a record of all your processes, so that you don't lose any of the information and can optimise your time and work.

A machine connected to the cloud, to your devices and to any piece of equipment you can imagine.



CONNECT

+Productivity

A MACHINE CREATED TO IMPROVE YOUR PRODUCTIVITY.

Improve productivity thanks to communication with the machine and process automation connecting your machine with other devices such as robots and electrode changers, including them in manufacturing cells and integrating communication software between the machine and these devices.

COMMUNICATION.

Connect to the latest applications installed on your ONA IRIS machine and benefit from having remote control of your manufacturing process.

- Desktop viewer: Access your desktop from your machine.
- Receive communications on your mobile device with information about the status of the machine with the Email sender.

View the status of several machines from a computer thanks to the Plant monitor.



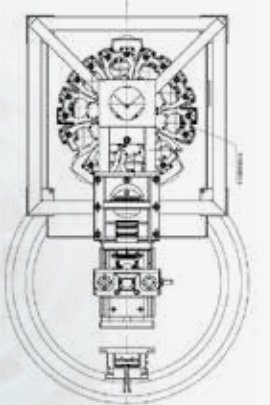
AUTOMATION.

In addition, automate your work thanks to the integration of machines in manufacturing cells and the installation of robots or automatic changers. Add hours of processing without machine downtime.



40-POSITION ELECTRODE CHANGER.

Automatic tool changers, maximum number of hours without downtime thanks to process automation. The widest range of automatic changers (including linear versions and the rotary one with 20 or 40 positions) which guarantee maximum performance to each client's specific needs. We also manufacture special changers for large or heavy electrodes.



Other digital tools and service options are available, please check our full SMART SERVICES catalogue in our website: www.onaedm.com/services

ONA IRIS SIMULATE

THE POWER OF SIMULATION

A powerful graphics engine that allows you to have absolute control over your project and ensure that what you see is what you get in a simple, intuitive and practical way.



SIMULATE

Simulate your processes

POWERFUL 3D GRAPHIC ENGINE UNIQUE IN THE MARKET.

ONA IRIS has the first CNC on the market that visualises the real execution of a die-sinking EDM job in 3D.

The great power of the ONA IRIS CNC allows the following tasks to be carried out simultaneously:

REMOTE EXECUTION OF A CAD/CAM (VNC CLIENT IN THE ONA IRIS CNC).

ONA IRIS allows the operator to connect and share a CAD/CAM installed on a remote computer. The operator can work from the machine's CNC as if it had its own CAD/CAM installed since it is possible to access a remote desktop in order to run external applications. The ONA IRIS CNC can work both as a VNC client and as a VNC server.

3D SIMULATION OF A JOB TO BE EXECUTED.

The CNC imports the 3D models of the part and the electrodes, and the 3D graphics engine represents the execution.

3D RENDERING OF THE EXECUTION IN PROGRESS.

ONA IRIS allows the simulation of the program in 3D, checking the machining positions for each electrode without the need to execute programs in anti-collision with real movement. While the machine is working, the CNC allows a new job to be simulated in 3D before executing it.

The ONA IRIS CNC also displays 3D models of parts and electrodes in a wide variety of file formats (STEP, IGES, VRML, BREP, etc.).

SIMULATE

Easy operation and visualization.

INNOVATION AND SIMPLICITY AT ITS BEST.

We have taken the final step for optimising EDM work processes, making them simpler and more intuitive. The ONA IRIS machines have a very powerful numerical control whose main advantage is its easy operation. All users can obtain excellent results thus improving performance and optimising times. Yet another example of innovative development aimed at designing increasingly perfect machines adapted to the demands of the current market.

The new numerical control, designed on the concept of usability, has:

NEW INTERFACE.

Friendly menus designed for use in tablet mode.



CNC TOUCH CONTROL.

Fast, intuitive, and big format touch screen.



CNC SIMULATOR.

Play with the simulator of the CNC from your desktop computer.

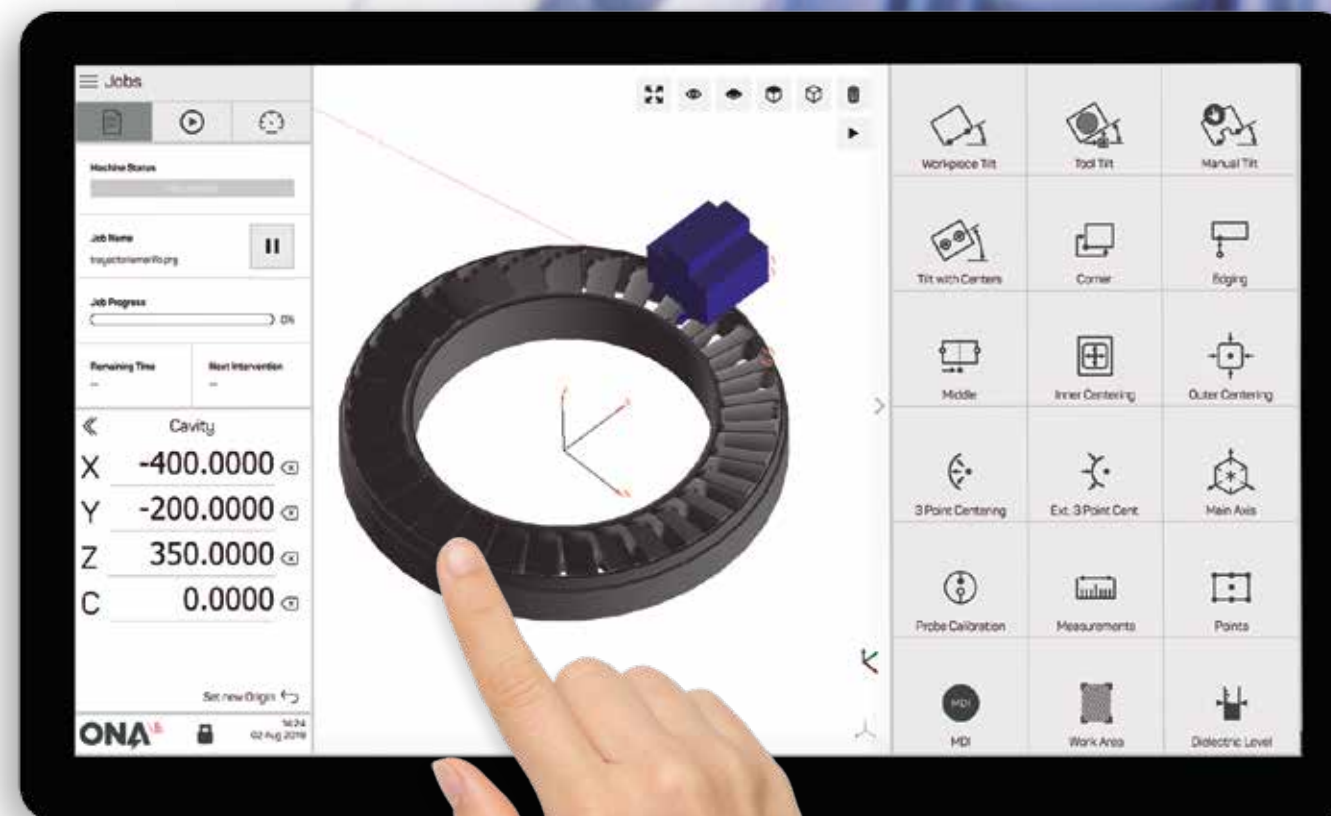


APPLICATION PATTERNS.

Interactive assistance to get the best result.



Our work is aimed at obtaining a top quality part in the shortest time possible. This is why we developed an interactive assistance program for our machines, APPLICATION PATTERNS. These are a series of assistance templates for creating specific applications (such as ribs, large electrodes, drills, sub-gates, micro) that guarantee excellent results just by choosing a pattern that best fits the piece. This new aid included in the ONA IRIS range also offers the user different strategies for a wide range of materials. Simple, quick and safe!



ONA IRIS

SIMULATE Task planning with jobs.

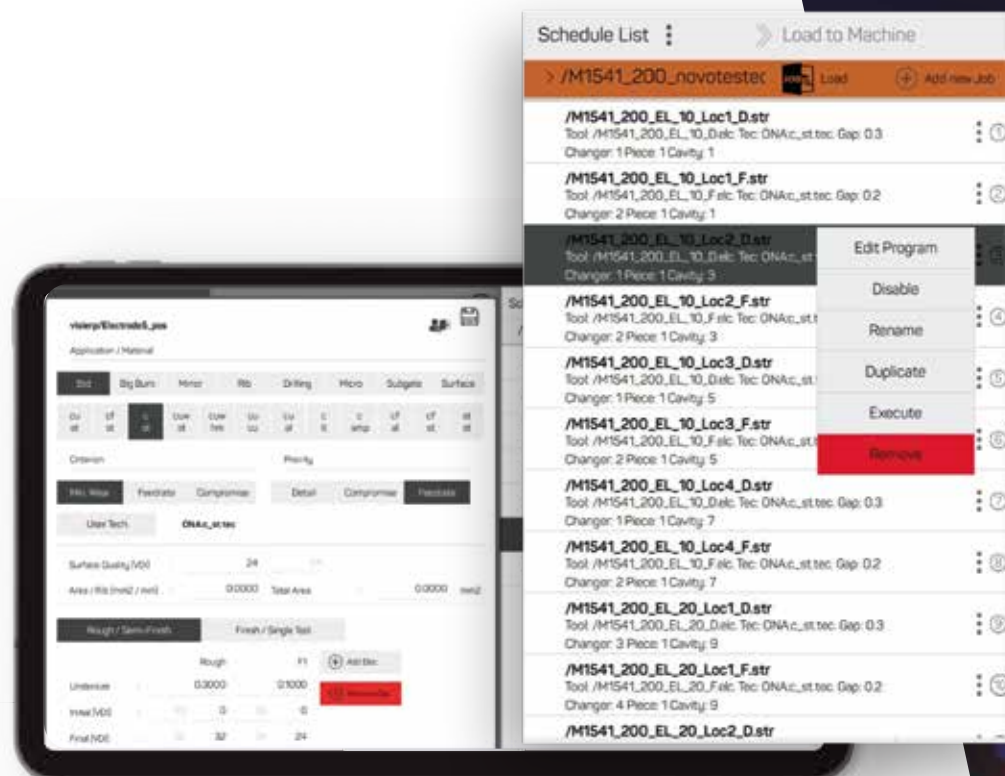
**JOB IS OUR FRIENDLY
USER INTERFACE
THAT SIMPLIFIES THE
MANAGEMENT OF THE
WORK TO BE DONE.**

From simple programs to complete manufacturing orders, all the information necessary to process an EDM job can be contained in the JOB, including its priority in the Jobs queue.

- Electrode & Piece Data
- EDM Details
- Machining Locations

**SCHEDULE
LIST.**

- Organize machining
- Enable/Disable Machining
- During the execution you can see the state of each machining (Finished, executing, waiting to be executed, disable/enable)

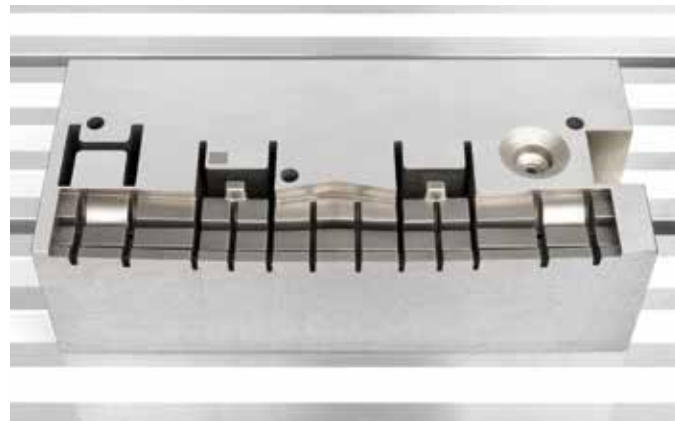


SIMULATE

Greater control to enhance performance.

TIME SAVINGS WITH CONTROLLED ORBITAL EROSION.

Our innovation team has developed the JOS Advanced System (Jump Orbit System), an evolution of the JOS orbital algorithm. This new algorithm reduces the orbit time and guarantees a uniform, top quality finishing in less time.



UP TO 8 AXES. \

ONA IRIS machines include a very powerful control with up to 8 simultaneously interpolating axes and volumetric compensation in the entire work area. They are faster and more efficient, and capable of self-adjusting in order to obtain the best performance possible with minimum operating costs.

In addition, they come with the A SPACE function (erosion axis in the SPACE), which implies that any erosion function programmable in the CNC (spheres, cones, orbitals, vectors, etc.) can be carried out in any direction of the space.

INTUITIVE PROCESSES. \

The control incorporated in ONA IRIS models makes it easy to operate the machine thanks to a quick standardised process that gives master results. With a cutting-edge CNC technology that optimise its handling by the user and achieves higher level of automation. EDM becomes a simple process where the machines take the most difficult decisions. As a result, the processes are more autonomous, effective and reliable. Perfect results with enhanced performance.

ONA IRIS WIN

THE CERTAINTY OF WINNING

The most powerful generator on the market: 100% digital, configurable and programmable, which, together with unique tools and an unprecedented capacity to simulate and visualise tasks, gives the best results. TO ENSURE SUCCESS. ALWAYS.



400A

The most
POWERFUL
generator in
the market

WIN

The most powerful generator in the market.

GENERATOR 30% MORE POWERFUL THAN THE REST OF THE MARKET.

Work in innovation and development has allowed us to incorporate improvements guaranteeing a competitive edge. Our standard generator, which includes 100 A and 200 A configurations is 30% more powerful than other generators and is the most powerful on the market. It is capable of reaching up to 400 A in intensity. It is the perfect solution for applications requiring high material removal and great speed.



**30%
+ POWERFUL**

100 A •
400 A •



● SPECIAL ONA GENERATOR
● ONA GENERATOR
● STANDARD GENERATOR

SPEAKERS

Type of graphite **EDM-3**

Total time **43 hours**

Final roughness **18 VDI Speaker**

Surface area **350 cm2**

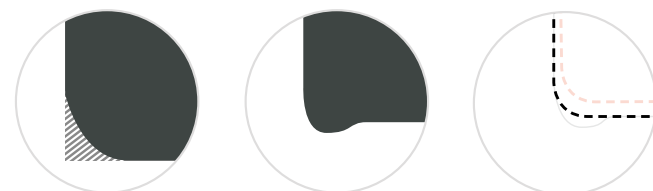
Roughing and finishing are carried out with a single electrode.

WIN

A perfect precision for accurate works.

GET PERFECT PRECISION IN FINISHES, CORNERS AND EDGES.

Automatic monitoring and optimization of over 30 EDM parameters guarantees maximum quality and efficiency of the process. With the our Expert System, we achieve maximum precision, and minimise the wear of graphite electrodes, thus preventing build-up on the corners and edges of the electrodes.



INCORRECT

INCORRECT

CORRECT

Perfect results on corners and edges thanks to special control points system.

MORE PRECISE MICRO MACHINING. IMPROVED PRECISION OF THE INTERNAL RADIUS OF UP TO 5 MICRONS.

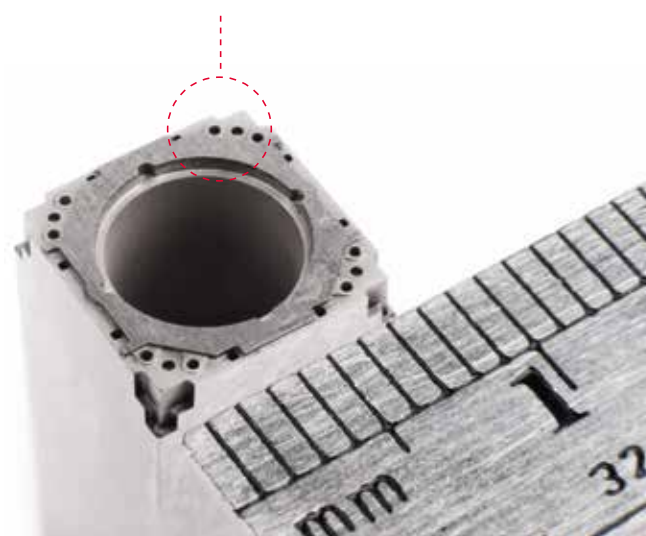
The new digital generator is capable of regulating intensity with great resolution, and can handle technology for electrodes with extremely small undersize (0.030 – 0.015 mm) and machining of internal radio of up to 0.005mm.



Erosion diameter measurement.



Electrodes used for making the application.



Die-mold for a smartphone camera.

DIE-MOLD FOR SMARTPHONE CAMERA.

Results	Others	ONA IRIS
Time	26 min	16 min
Finishing	8-9 VDI	7 VDI
Radius	0.006 mm	0.005 mm
Workpiece material	SK 11	SK

Cavity dimensions **<1 mm²** Electrode material **Copper**

WIN

It raises the speed of RIB machining by 40%.

INCREASE YOUR PROFITABILITY FROM SAVINGS IN ELECTRODES.

The Expert System optimises the machining process and adapts it to the load conditions of each moment. In addition, it catalogues each spark according to its quality and eliminates those that fail to contribute to quality machining. This results in great improvements in productivity.

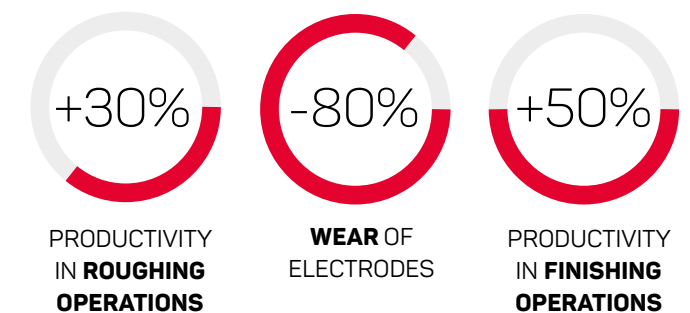
The digital generator optimises machining parameters in narrow, deep cavities, increasing productivity by between 25 and 50% and reducing electrode wear by between 80 and 500%. Ribs made more quickly and with fewer electrodes.

RIBS



Results	Others	ONA IRIS
Time	2h 52min	1h 58min
Electrode wear	-0.045	-0.006

Electrode size **40*1.5 mm**
 Electrode material **Medium graphite**
 Workpiece material **Steel**
 Wedge Depth **35mm**



WIN

The best solution of the machining of poor conductive materials.

Thanks to the new design in intensity control, optimum energy density can be achieved for the characteristics of each material, thus avoiding possible damage caused by an excess of temperature. This affords improved erosion performance and guarantees a fault-free (cracks, surface alterations) surface finish.



HOME
APPLIANCES.

Running time **11 h 12 min**

Graphite **Ellor 50**

N° of electrodes **2**

Material **P20 steel**

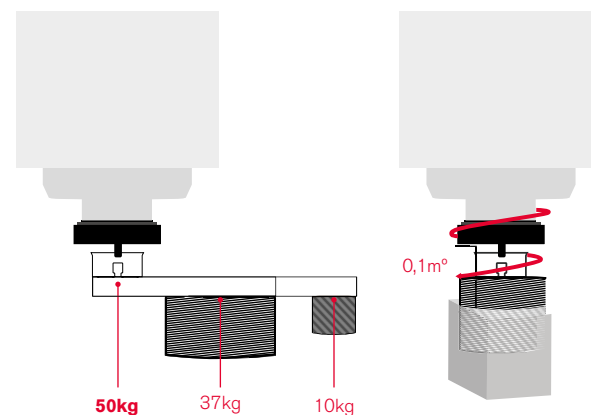
Surface finish **24 VDI**

WIN

Mechanics design to achieve maximum performance.

MAXIMUM ROBUSTNESS OF THE C AXIS.

A reinforced C axis affording stability in erosion with electrodes that have high moments of inertia (aprox. 12,000 kg/ cm²). Precision mechanics to within a thousandth of a degree. Dynamic correction of the electrode in C which allows for complex erosions to be carried out with synchronised interpolations combining, for example, linear and rotary axes in the machining of Impeler 3D-type pieces. Its robustness permits the use of large electrodes.



MACHINE HEAD



WIN Pieces of up to 25 tons.

FAILPROOF PRECISION OF POSITIONING.

Linear scales with direct measurement of positioning guarantee precision throughout the machine's useful life. Direct position measurement by means of linear scales with 0.1 μm resolution. Failproof verification of positioning in real time prevents precision errors. In addition, it eliminates the need for periodic maintenance and calibration operations.



MECHANICS DESIGNED TO ACHIEVE MAXIMUM PERFORMANCE WITH PIECES OF UP TO 25 TONS.

The machine's structure is manufactured in grey cast iron which is subsequently stabilised. Its structure is symmetrical in design to prevent thermal deformations. The work table is fixed, with a load capacity for pieces of up to 25 tons (ONA IRIS10/ ONA IRIS T10).

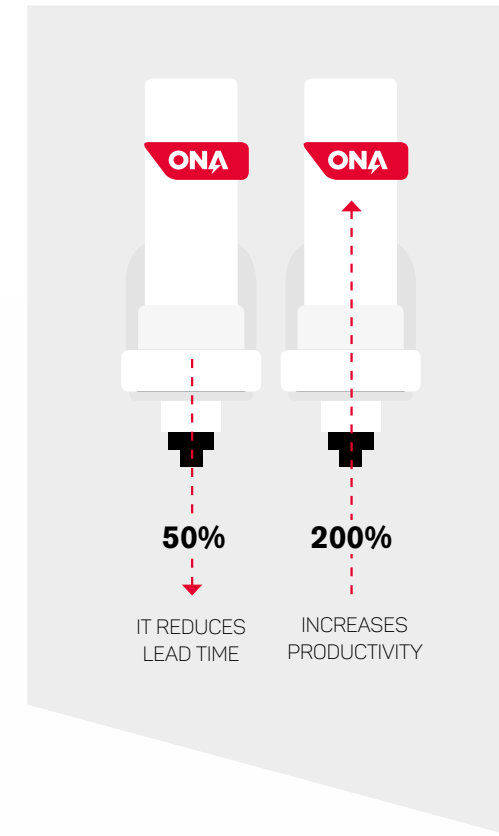


WIN Modular design for all needs.

UNPRECEDENTED FLEXIBILITY.

The versatile modular design of our large machines allows more than 40 combinations.

Each client can configure their own equipment depending on their needs.



DOUBLE HEAD. EROSION TIME SAVINGS OF 50% AND GREATER EFFICIENCY WITH UP TO 200% IN PRODUCTIVITY.

ONA IRIS machines can have a second head, implying a reduction of erosion time of up to 50% and an increase in productivity of up to 200%. Half the time to get the same results.



Y travel
750 or 1000 or
1200 or 1500mm

X travel
1500 or 2000
or 3000mm

Z travel
650 or 800
or 1000mm



Modular design

The large-scale ONA IRIS series uses a modular design to allow many configurations.



Configurable

Each customer can configure, with a great flexibility, the machine that meets his exact requirements.



Pre-built axes modules.

The ONA IRIS series utilizes prebuilt axes modules to drastically reduce machine assembly time.



Tailor-made machine.

Customers can get a tailor-made machine at the same price and delivery time as a standard machine.

Ecodesign: The certainty of keep on winning.



GREATER PRODUCTIVITY WITH GREATER ENERGY SAVINGS.

A more efficient generator implying greater productivity. Energy efficiency to improve performance. More-over, we are highly focused on the maximum optimisation of the tool changer or robot thanks to the savings in the number of necessary electrodes (ZERO WEAR).



LASTING, RELIABLE MACHINES.

The new generation of ONA IRIS machines have the traditional robustness and reliability that has always characterised ONA machines. Its robust design & high standard of manufacturing ensure a long useful lifetime for the machine.



LOGISTICS OPTIMISATION.

Compact machines designed for the greatest use of space in the plant. We are concerned about savings in transport and in packaging, with a smaller carbon footprint in their production and in the life cycle.



MORE ECONOMICAL ECOLOGICAL FILTER.

There are only advantages with the long-lasting filter. At ONA, we are committed to recycling and optimum waste separation:

Waste separation.

Superior quality filtering.

Financial savings. Elimination of consumable filter cartridges.

Reduction of storage space to zero, for new as well as used cartridges.

Self-cleaning system permitting the continuous working of the machine, with no downtime, thus maximising its output.

Guaranteed 10,000 working hours with no maintenance costs.

FILTER COST SAVINGS

6 filter cartridges	30 euros/each
Hourly rate for EDM	25 euros/hour
Wage costs	25 euros/hour
Cartridge duration	150/200 working hours

TOTAL FILTER COST

Cartridge changeover time	0.5h
6 filters x 30 euros	180 euros
Machine down time: 0.5 h. x 25 euros	12.5 euros
Wage costs: 0.5 h. x 25 euros	12.5 euros
TOTAL COSTS IN 2 WEEKS (150/200 H.)	> 205€

The ONA filter system provides savings of at least €5,125 per annum (50 weeks)

Technical specifications

Milimeters.



SPECIFICATIONS			ONA IRIS4	ONA IRIS6	ONA IRIS6+	ONA IRIS6 AOM
MACHINE		Units				
X axis travel		mm	600	1000	1000	1000
Y axis travel		mm	400	600	800	750
Z axis travel		mm	400	500	500	650
C axis course		°	360	360	360	360
XYZ positioning resolution		mm	0.0001	0.0001	0.0001	0.0001
C positioning resolution		°	0.001	0.001	0.001	0.001
X, Y maximum travel speed		mm/min	6000	3000	3000	3000
Z maximum travel speed		mm/min	18000			
WORKING TANK						
Door			Fold-down tank	Drop door	Drop door	Drop door
Tank measurements		mm	1070 x 770 x 450	1700 x 1000 x 600	1700 x 1200 x 600	1700 x 1300 x 700
Table measurements		mm	800 x 600	1200 x 800	1200 x 800	1200 x 1000
Max. distance between head and table	Without C axis	mm	675	800	800	1000
	With C axis	mm	635	760	760	970
Max. height of dielectric		mm	420	565	565	650
Max. height of the workpiece		mm	370	515	515	600
Permissible weight on the table		kg	1500	4000	4000	5000
Max. weight of the electrode (**)		kg	100	300 (***)	300 (***)	300 (***)
Max. weight of the electrode with C axis		kg	50	50	50	50
Permissible weight in electrode changer (****)		kg	50/10	50/10	50/10	100/10

Linear 9 and 18-position electrode changer.
Rotating 20 and 40-position electrode changer.
Dielectric cooling system.
Input current stabilisers.

SPECIFICATIONS		ONA IRIS4	ONA IRIS6	ONA IRIS6+	ONA IRIS6 AOM
GENERATOR	Units				
Intensity	Amp	100 200 400	100 200 400	100 200 400	100 200 400
Programmable intensities	Amp	From 0 to 400 Amp, in amp decimals			
Ignition voltages	V	Between 40 V and 250 V			
Max. copper stock removal capacity	mm³/min	550	550	550	550
Max. graphite stock removal capacity	mm³/min	660	660	660	660
Volumetric wear of copper	%	<0.10%	<0.10%	<0.10%	<0.10%
Volumetric wear of graphite	%	<0.05%	<0.05%	<0.05%	<0.05%
Improved surface finish (µm)	Ra	0.08 - 0.1	0.08 - 0.1	0,08 - 0,1	0.08 - 0.1

CNC

Display	21" TFT color
Min programmable and controllable increase	0.0001 mm/0.001º
Max. programmable dimension	±9999.999 mm
Memory capacity	16GB RAM
Remote control	Standard

FILTRATION UNIT

Filtration system	Long-lasting environment-friendly filter			
Filtration quality	1 µm	1 µm	1 µm	1 µm
Replacement of filtration elements	>10000 hours	>10000 hours	>10000 hours	>10000 hours
Cleaning means	Automatic	Automatic	Automatic	Automatic
Cleaning	Head (pressure, intermittent)	Programmable from 1 to 31		
	Tank (pressure, suction, intermittent)	Programmable from 1 to 31		

GENERAL CHARACTERISTICS

Total weight	Kg	4900	7400	7400	8400
Maximum height	mm	2850	2930	2930	3460
Floor surface area	mm	2270 x 2800	3300 x 3370	3500 x 3800	3000 x 4535
Maximum power required (****)	KVA	14 / 20.9	14.4 / 20.9	14.4 / 20.9	14.4 / 20.9

(**) On electrode holder plate.
(***) Optional 400 kg.
(****) Total load/Unit maximum in linear changer.
(*****) 100/200 Amp medium intensity amperes.
Due to its continuous review of technology and design, ONA ELECTROEROSIÓN reserves the right to modify the specifications of this catalogue without prior notice.



SPECIFICATIONS		ONA IRIS 7/T7	ONA IRIS 8/T8	ONA IRIS 9/T9	ONA IRIS 10/T10
MACHINE	Units				
Total X axis travel	mm	1500 (830)	2000 (1200)	2000 (1200)	3000 (2000)
Y axis travel	mm	750/1000	750/1000	1200	1000/1500
Z axis travel	mm	650/800	650/800	800	800/1000
C axis course	°	360	360	360	360
XYZ positioning resolution	mm	0.0001	0.0001	0.0001	0.0001
C positioning resolution	°	0.001	0.001	0.001	0.001
X, Y maximum travel speed	mm/min	3000		3000	
Z maximum travel speed	mm/min	18000		18000	
WORKING TANK					
Door		Drop door	Drop door	Drop door	Drop door
Tank measurements (*)	mm	2300 x 1500 x 1000	2800 x 1500 x 1000	2800 x 1700 x 1000	4000 x 2000 x 1250
Table measurements (*)	mm	1700 x 1000	2200 x 1000	2200 x 1200	3200 x 1600
Max. distance between head and table	Without C axis	mm	1200	1200	1200
	With C axis	mm	1170	1170	1170
Max. height of dielectric (*)	mm	950	950	950	1180
Max. height of the workpiece (*)	mm	900	900	900	1130
Permissible weight on the table	kg	15000	20000	20000	25000
Max. weight of the electrode (**)	kg	300	300	300	300
Max. weight of the electrode with C axis	kg	50	50	50	50
Permissible weight in electrode changer (****)	kg	100/10	100/10	100/10	100/10

Linear 11- and 44-position electrode changer.
Rotating 40-position electrode changer.
Changer for large electrodes up to 50 kg. of weight. Dielectric cooling system.
Input current stabilisers.

SPECIFICATIONS		ONA IRIS 7/T7	ONA IRIS 8/T8	ONA IRIS 9/T9	ONA IRIS 10/T10
GENERATOR	Units				
Intensity	Amp	100/200/400	100/200/400	100/200/400	100/200/400
Programmable intensities	Amp	From 0 to 400 Amp, in amp decimals			
Ignition voltages	V	Between 40 and 250			
Max. copper stock removal capacity	mm3 / min	550	550	550	550
Max. graphite stock removal capacity	mm3 / min	660	660	660	660
Volumetric wear of copper	%	<0.10%	<0.10%	<0.10%	<0.10%
Volumetric wear of graphite	%	<0.05%	<0.05%	<0.05%	<0.05%

CNC	
Display	21" TFT color
Min programmable and controllable increase	0.0001 mm /0.001°
Max. programmable dimension	±9999.999 mm
Memory capacity	16GB RAM
Remote control	Standard

FILTRATION UNIT				
Filtration system	Long-lasting environment-friendly filter			
Filtration quality	1 µm	1 µm	1 µm	1 µm
Replacement of filtration elements	>10000 hours	>10000 hours	>10000 hours	>10000 hours
Cleaning means	Automatic	Automatic	Automatic	Automatic
Cleaning	Head (pressure, intermittent)	Programmable from 1 to 31		
	Tank (pressure, suction, intermittent)	Programmable from 1 to 31		

GENERAL CHARACTERISTICS					
Total weight (*)	Kg	13800	16000	18500	22500
Maximum height (*)	mm	3585	3585	3585	4120
Floor surface area (*)	mm	3860 x 4525	4440 x 4725	4440 x 5400	6640 x 5800
Maximum power required (****)	KVA	14.4 / 20.9	14.4 / 20.9	14.4 /20.9	26.3 / 29.3

(*) Request the different configurations available. The data specified correspond to the largest machine in each of the models. (**) On an electrode holder plate.
(**) Optional 400kg.
(****) Total load/ Unit maximum in linear changer.
(*****) 100/200 Amp. medium intensity amperes.
Due to its continuous review of technology and design, ONA ELECTROEROSIÓN reserves the right to modify the specifications of this catalogue without prior notice.

Technical specifications

Inches.



SPECIFICATIONS			ONA IRIS4	ONA IRIS6	ONA IRIS6+	ONA IRIS6 AOM
MACHINE		Units				
X axis travel		inches	23.6	39.3	39.3	39.3
Y axis travel		inches	15.7	23.6	31.5	29.5
Z axis travel		inches	15.7	19.7	19.7	25.5
C axis course		°	360	360	360	360
XYZ positioning resolution		inches	0.000004	0.000004	0.000004	0.000004
C positioning resolution		°	0.001	0.001	0.001	0.001
X, Y maximum travel speed		in/min	236.2	118.1	118.1	118.1
Z maximum travel speed		in/min	708.6			
WORKING TANK						
Door			Fold-down tank	Drop door	Drop door	Drop door
Tank measurements		inches	42.1 x 30.3 x 17.7	66.9 x 39.3 x 23.6	70.8 x 47.2 x 27.5	66.9 x 51.1 x 27.5
Table measurements		inches	31.5 x 23.6	47.2 x 31.4	47.2 x 31.4	47.2 x 39.3
Max. distance between head and table	Without C axis	inches	25.5	31.4	31.4	39.3
	With C axis	inches	23.6	29.9	29.9	38.1
Max. height of dielectric		inches	16.5	22.2	22.2	25.5
Max. height of the workpiece		inches	14.5	20.2	20.2	23.6
Permissible weight on the table		lbs	3300	8820	8820	11023
Max. weight of the electrode (**)		lbs	220	650 (***)	650(***)	650 (***)
Max. weight of the electrode with C axis		lbs	110	110	110 lb	110
Permissible weight in electrode changer (****)		lbs	110/22	110/22	110/22	220.4/22

Linear 9 and 18-position electrode changer.
Rotating 20 and 40 -position electrode changer.
Dielectric cooling system.
Input current stabilisers.

SPECIFICATIONS		ONA IRIS4	ONA IRIS6	ONA IRIS6+	ONA IRIS6 AOM
GENERATOR	Units				
Intensity	Amp	100 200 400	100 200 400	100 200 400	100 200 400
Programmable intensities	Amp	From 0 to 400 Amp, in amp decimals			
Ignition voltages	V	Between 40 V and 250 V			
Max. copper stock removal capacity	in³/min	0.03	0.03	0.03	0.03
Max. graphite stock removal capacity	in³/min	0.04	0.04	0.04	0.04
Volumetric wear of copper	%	<0.10%	<0.10%	<0.10%	<0.10%
Volumetric wear of graphite	%	<0.05%	<0.05%	<0.05%	<0.05%
Improved surface finish (µm)	Ra	0.08 - 0.1	0.08 - 0.1	0,08 - 0,1	0.08 - 0.1

CNC	
Display	21" TFT color
Min programmable and controllable increase	0.000004 in /0.001°
Max. programmable dimension	±393700.75 in
Memory capacity	16GB RAM
Keyboard	Flat, anti-dirt
Remote control	Standard

FILTRATION UNIT	
Filtration system	Long-lasting environment-friendly filter
Filtration quality	1 µm
Replacement of filtration elements	>10000 hours
Cleaning means	Automatic
Cleaning	Head (pressure, intermittent)
	Tank (pressure, suction, intermittent)

GENERAL CHARACTERISTICS	
Total weight	lbs
Maximum height	inches
Floor surface area	inches
Maximum power required (****)	KVA

(**) On electrode holder plate.
(***) Optional 881.8 lbs.
(****) Total load/Unit maximum in linear changer.
(*****) 100/200 Amp medium intensity amperes.
Due to its continuous review of technology and design, ONA ELECTROEROSIÓN reserves the right to modify the specifications of this catalogue without prior notice.



SPECIFICATIONS		ONA IRIS 7/T7	ONA IRIS 8/T8	ONA IRIS 9/T9	ONA IRIS 10/T10
MACHINE	Units				
Total X axis travel	inches	59 (32.6)	78.7 (47.2)	78.7 (47.2)	118.1 (78.7)
Y axis travel	inches	29.5 / 39.3	29.5/ 39.3	47.2	39.3/ 59
Z axis travel	inches	25.5/ 31.5	25.5/ 31.5	31.4	31.5/ 39.3
C axis course	°	360	360	360	360
XYZ positioning resolution	inches	0.000004	0.000004	0.000004	0.000004
C positioning resolution	°	0.001	0.001	0.001	0.001
X, Y maximum travel speed	in/min	236.2		236.2	
Z maximum travel speed	in/min	708.6		708.6	
WORKING TANK					
Door		Drop door	Drop door	Drop door	Drop door
Tank measurements (*)	inches	90.5 x 59 x 39.3	110.2 x 59 x 39.3	110.2 x 66.9 x 39.3	157.48 x 78.7x 49.2
Table measurements (*)	inches	66.9 x 39.3	86.6 x 39.3	86.6 x 47.2	125.9 x 62.9
Max. distance between head and table	Without C axis	inches	47.2	47.2	59,0
	With C axis	inches	46.0	46	57.8
Max. height of dielectric (*)	inches	37.4	37.4	37.4	46.4
Max. height of the workpiece (*)	inches	35.4	35.4	35.4	44.4
Permissible weight on the table	lbs	33069.3	44092.4	44092.4	55115.5
Max. weight of the electrode (**)	lbs	660	660	660	660
Max. weight of the electrode with C axis	lbs	110	110	110	110
Permissibleweightinelectrodechanger (****)	lbs	220 / 22	154 / 22	220 / 22	220 / 22

Linear 11- and 44-position electrode changer.
Rotating 40-position electrode changer.
Changer for large electrodes up to 50 kg. of weight. Dielectric cooling system.
Input current stabilisers.

SPECIFICATIONS		ONA IRIS 7/T7	ONA IRIS 8/T8	ONA IRIS 9/T9	ONA IRIS 10/T10
GENERATOR	Units				
Intensity	Amp	100/200/400	100/200/400	100/200/400	100/200/400
Programmable intensities	Amp	From 0 to 400 Amp, in amp decimals			
Ignition voltages	V	Between 40 and 250			
Max. copper stock removal capacity	in³/min	0.03	0.03	0.03	0.03
Max. graphite stock removal capacity	in³/min	0.04	0.04	0.04	0.04
Volumetric wear of copper	%	<0,10%	<0,10%	<0,10%	<0,10%
Volumetric wear of graphite	%	<0,05%	<0,05%	<0,05%	<0,05%

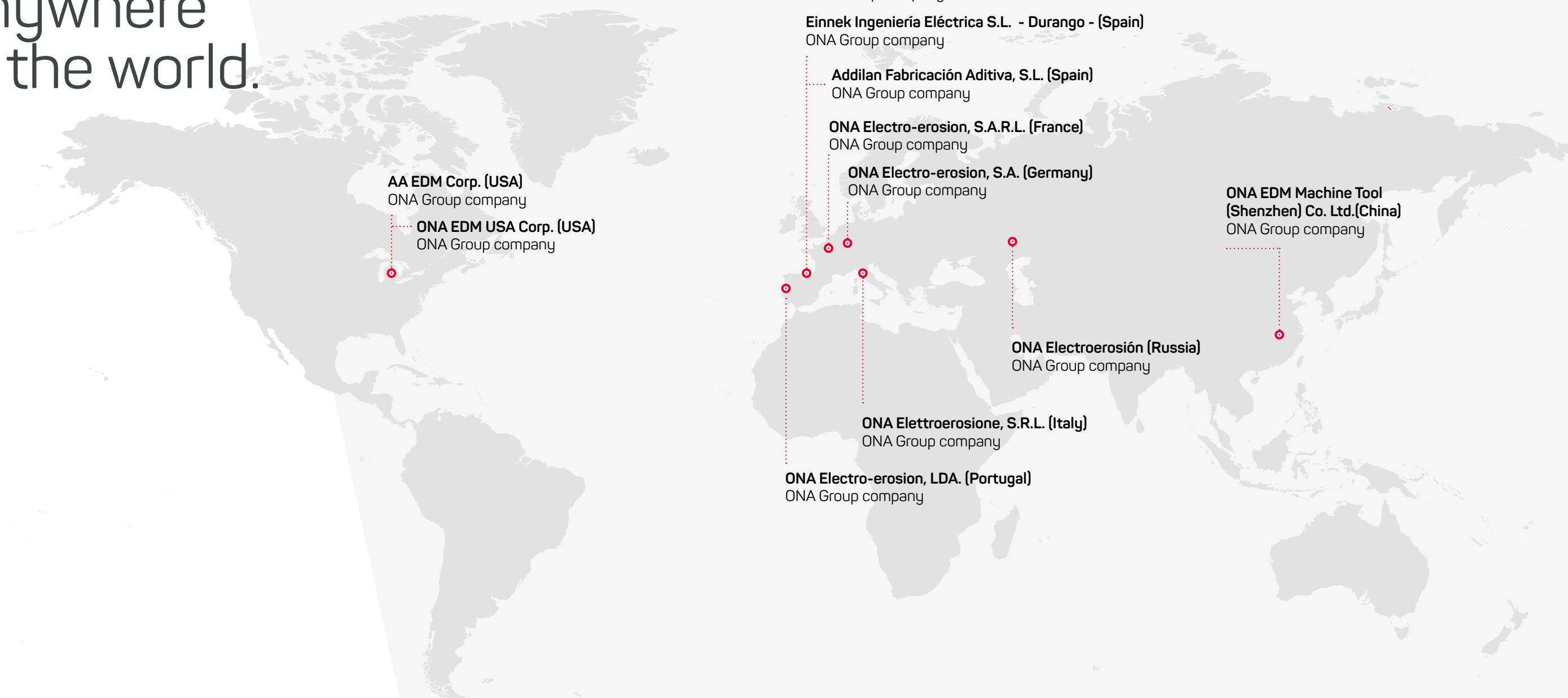
CNC	
Display	21" TFT color
Min programmable and controllable increase	0.000004 in /0.001º
Max. programmable dimension	±393700.75 in
Memory capacity	16GB RAM
Remote control	Standard

FILTRATION UNIT				
Filtration system	Long-lasting environment-friendly filter			
Filtration quality	1 µm	1 µm	1 µm	1 µm
Replacement of filtration elements	>10.000 hours	>10.000 hours	>10.000 hours	>10.000 hours
Cleaning means	Automatic	Automatic	Automatic	Automatic
Cleaning	Head (pressure, intermittent)	Programmable from 1 to 31		
	Tank (pressure, suction, intermittent)	Programmable from 1 to 31		

GENERAL CHARACTERISTICS					
Total weight (*)	lbs	30423.7	35273.9	40785.5	49604
Maximum height (*)	inches	141.1	141.1	141.1	162.20
Floor surface area (*)	inches	151.9 x 178.1	174.8 x 186	174.8 x 212.5	261.4 x 228.3
Maximum power required (*****)	KVA	14.4 / 20.9	14.4 / 20.9	14.4 /20.9	26.3 / 29.3

(*) Request the different configurations available. The data specified correspond to the largest machine in each of the models. (**) On an electrode holder plate.
(**) Optional 881.8 lbs.
(****) Total load/ Unit maximum in linear changer.
(*****) 100/200 Amp. medium intensity amperes.
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Anytime and
anywhere
in the world.



AA EDM Corp. (USA)
ONA Group company

ONA EDM USA Corp. (USA)
ONA Group company

ONA Electroerosión, S.A. - Durango - (Spain)
Headquarters

Samylabs S.L. - Durango - (Spain)
ONA Group company

Einnek Ingeniería Eléctrica S.L. - Durango - (Spain)
ONA Group company

Addilan Fabricación Aditiva, S.L. (Spain)
ONA Group company

ONA Electro-erosion, S.A.R.L. (France)
ONA Group company

ONA Electro-erosion, S.A. (Germany)
ONA Group company

**ONA EDM Machine Tool
(Shenzhen) Co. Ltd.(China)**
ONA Group company

ONA Electroerosión (Russia)
ONA Group company

ONA Elettroerosione, S.R.L. (Italy)
ONA Group company

ONA Electro-erosion, LDA. (Portugal)
ONA Group company

\ People
\ Technology
\ Profitability

ONA ELECTROEROSIÓN (central)

Eguzkitza, 1
48200 Durango
Spain
\ ona@onaedm.com

ONA EDM USA, INC.

7455 Newman Blvd
Dexter, Mi. 48130
USA
\ service@onaedmusa.com
\ onausa@onaedm.com

ONA ELETTROEROSIONE S.R.L

Via M. D'Antona 59/61
10040 Rivalta di Torino (TO)
Italy
\ onaitalia@onaedm.com

ONA ELECTRO-EROSION, LDA.

C. Emp. Vilar do Pinheiro
Via José Regio (EN 13)
Fracção 1- Nº 388
4485-860 Vilar do Pinheiro
Portugal
\ onaportugal@onaedm.com

ONA EDM GERMANY

Theodor-Heuss-Straße 5
89340 Leipheim
Deutschland
\ serviceanfrage@onaedm.com

ONA ELECTRO-EROSION, FRANCE

810 avenue Georges Sand
42350 La Talaudière
France
\ onafrance@onaedm.com

ONA EDM Machine Tool (Shenzhen) Co. Ltd.

Room 108B, Building 8, Phase
II, Nanshan Yungu Innovation
Industrial Park,
Nanshan District, Shenzhen
Guangdong 518000
China
\ onachina@onaedm.com

ООО ОНАЕЛЕКТРОЕРОСИОН

125080, Moscow, Volokolamskoye
shosse, 2, floor 24, premises 1, room 1.
Russia
\ orussia@onaedm.com

☎ (+34) 946 200 800

✉ ona@onaedm.com

\ www.onaedm.com