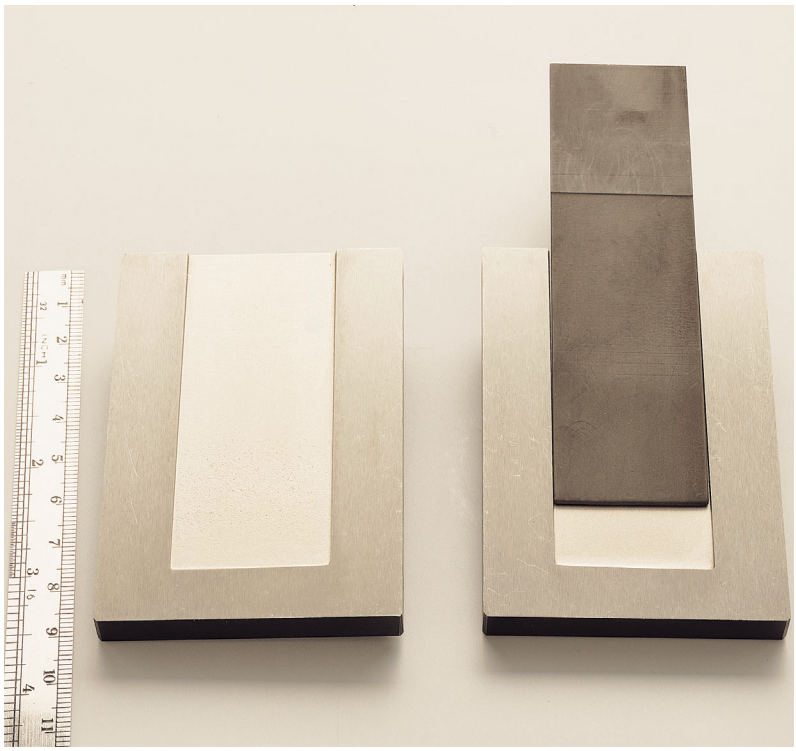
ONA CS - HS

Proven advances in performance, precision, and surface quality

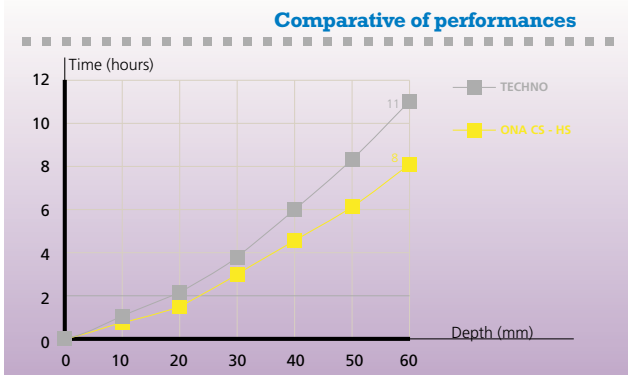
On the basis of the widely known ONA TECHNO models, ONA has produced the new CS and HS series. The technological innovations to be found in these units facilitate major advances in speed, precision, and quality.



Electrode: **graphite rib**
Width: **1 mm**
Length: **60 mm**
Workpiece: **steel**
Surface finish: **22 VDI - Ra 1,26 µm**

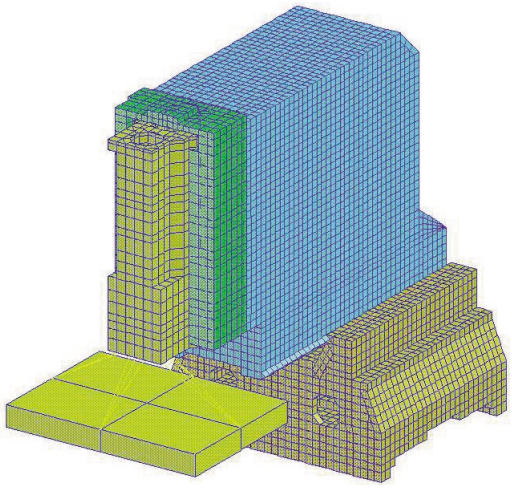
Shorter machining times

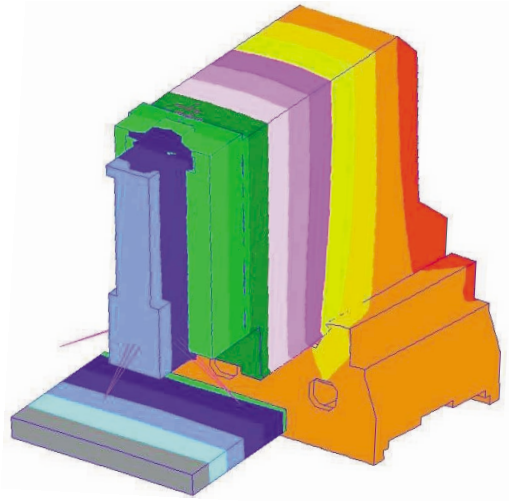
The improved design where mechanics and electronics are concerned means that machines in the CS and HS series are notably more efficient, especially in the case of jobs that involve very difficult flushing. These improvements have been possible thanks to a new high-speed pulse technology, which is based on faster head action and servomotor control. Thanks to the perfect combination of this technology with the advanced generator of the machine and its Erosion Expert System, becomes feasible obtaining deeper machining and flushing is no longer a problem. Also, precision is higher.



Optimized design of the head for the work at high speeds

The mechanical structure of the head has been specially designed to eliminate the vibrations produced by the faster accelerations and decelerations whereupon machines ONA CS and HS series work. Via the finite-element method is feasible analize every aspect ot the machine's structure under the most extreme conditions. The points submitted to the greatest stresses are reinforced, so that the structure is optimized. The result is maximum rigidity, which is a basic requirement for a faster and more precise erosion process.





Our finest specialists in EDM are at your service

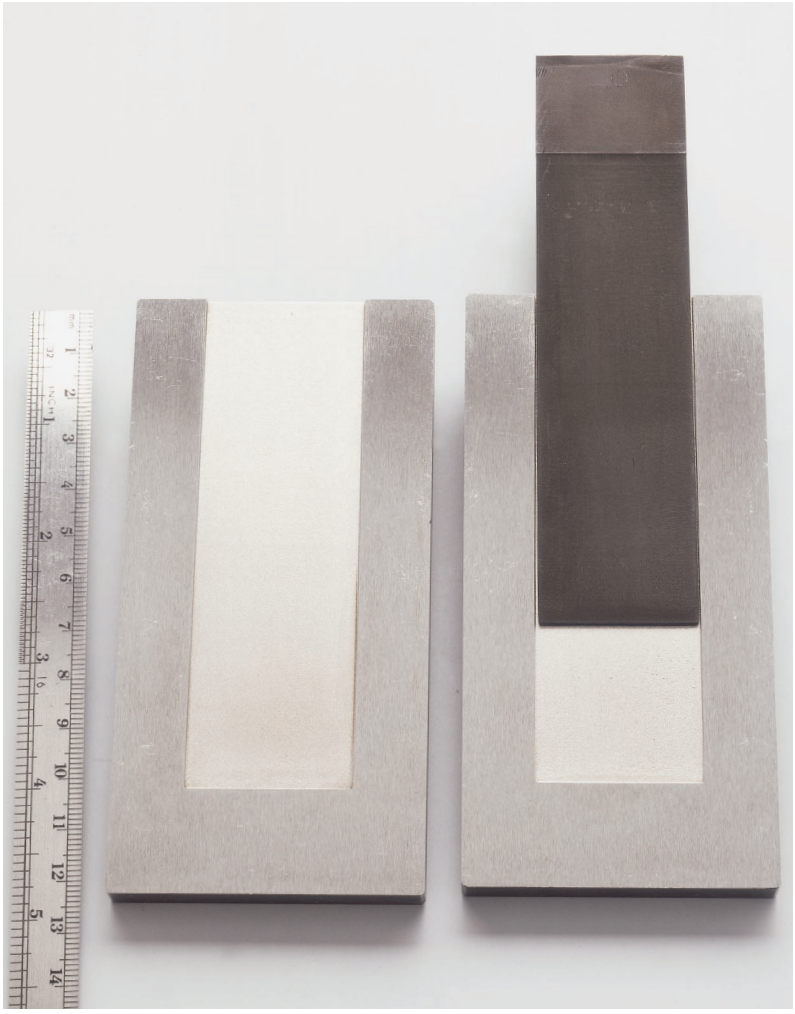
At ONA we understand that one of the best ways to ensure our client's success is to offer him the service and technical support that will enable him to get the most out of his EDM equipment. The Processes and Technology Service at ONA, managed by our finest specialists in EDM, aims to ensure that each of our products will fit perfectly into the client's particular environment. This exclusive service is absolutely free.

New technology tables and specific strategies for grooves

The CNC incorporates new technology tables specifically for the machining of grooves.

The strategy for automatic program generation also incorporates the information that the operator needs so that he can quickly and automatically generate the most suitable program for the type of groove being machined.

Deeper machining in work with grooves

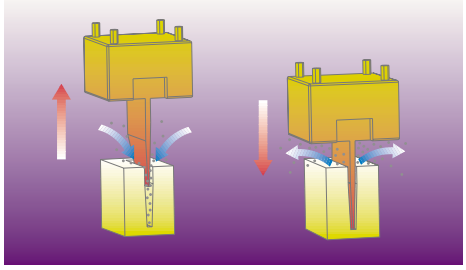


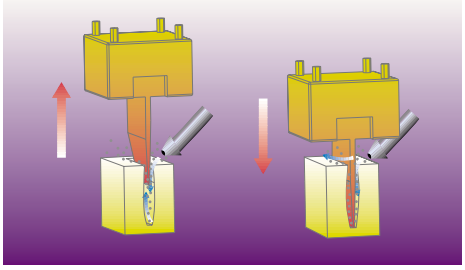
Very deep grooves can be machined, with the highest quality and precision guaranteed.

Electrode: **graphite**
Workpiece: **steel**
Technology used: **Ribs technology**
Depth: **100 mm**
Surface finish: **22 VDI - Ra 1,26 µm**

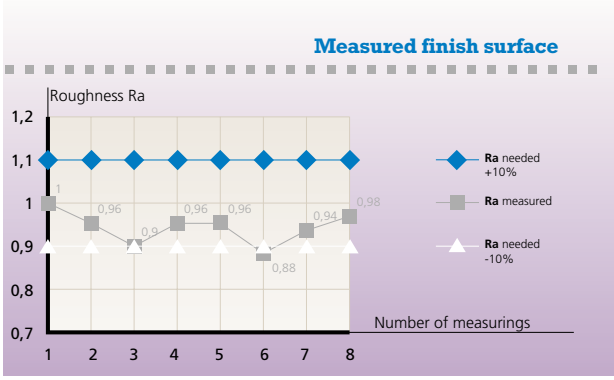
Higher precision

The new technology, based on high-speed pulse technology, makes it possible to machine grooves faster and more precisely. It is no longer necessary to use side flushing lances, avoiding deformations in the eroded cavity, produced by the dielectric flow.



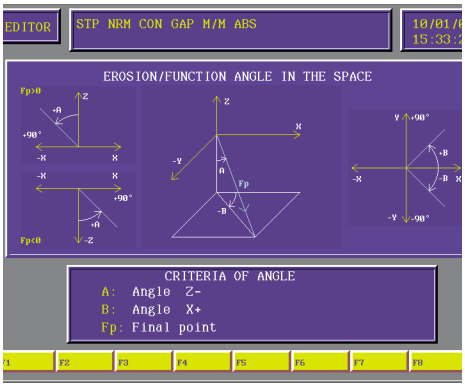


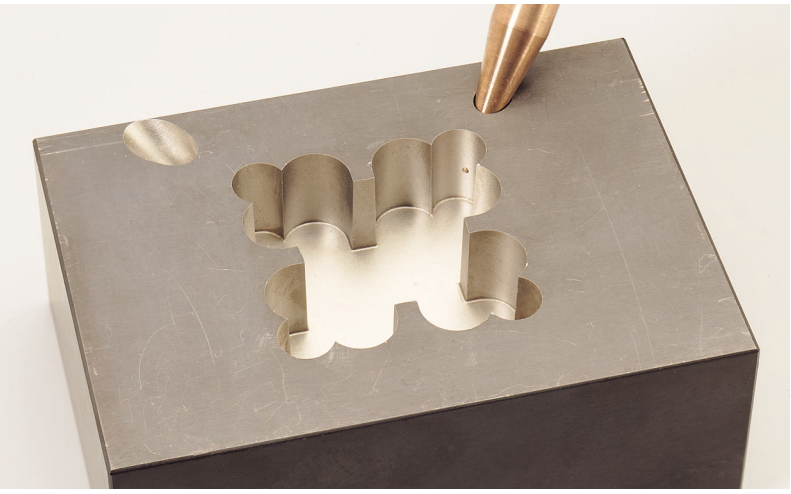
Electrode: **copper**
Workpiece: **steel**
Surface area: **225 cm²**
Technology applied: **Technology for copper/steel surfaces**
Surface finish required: **20 VDI- Ra 1,00 µm**



More homogeneous finish on large surface areas

Another advantage of high-speed pulse technology is more homogeneous finish on surfaces of large area. The CNC belonging to





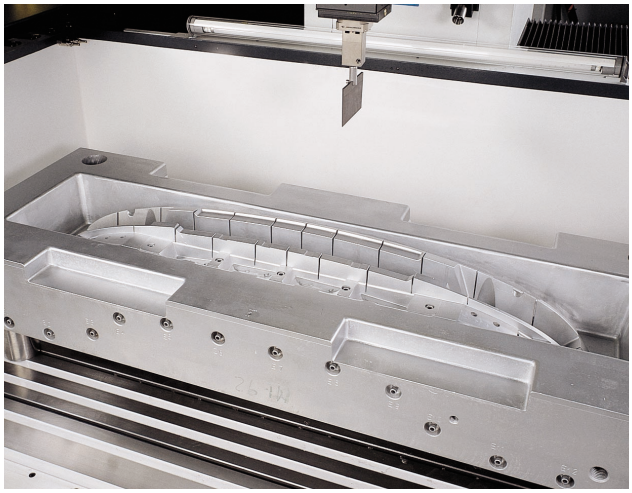
units in the CS and HS ranges incorporates new technology tables specifically intended for an excellent, homogeneous surface finish where the working area is large.

"New submarine" injection function

The new submarine injection function is a great aid to speed when the injection points required by a mould are being realized. The operator need only

ONA SERIE HS

Fixed working tank version



Large loading capacity and long traverses

The fixed-bedframe concept allows obtaining very long traverses on the X- and Y- axes, as well as a high stability.

The clamping system is fixed, so that the weight of the workpiece rests directly on the frame. The guidance system for the X-Y axes is thus submitted only to light, mechanical forces.

ONA SERIE CS

Rise and fall working tank version

100% performance without supervision

The Expert Erosion System controls the entire machining of a workpiece, from roughing all the way to finishing, ensuring optimum generator performance at each stage. The machine will operate twenty-four hours a day, seven days a week, in unattended mode. Its 100% performance and the quality of the end result will be guaranteed.

Surface finish of VDI=0

The high performance of the ONA CS and HS series generator, with surface finish to VDI=0, is absolutely reliable both in erosion operations and in fine-finish mode.

Specifications

Machine		CS300	CS400	HS300	HS400	HS600	HS700
"X" axis	mm.	400	600	400	600	1.000	1.500
"Y" axis	mm.	300	400	300	400	600	750
"Z" axis	mm.	300	400	300	400	500	500
"C" axis	°	360	360	360	360	360	360
Working tank							
Type		Rise and fall system		Fixed			
Tank dimensions	mm.	900 x 500 x 300	1.100 x 700 x 400	900 x 550 x 300	1.200 x 800 x 400	1.700 x 1.000 x 600	2.300 x 1.300 x 700
Work table dimensions	mm.	550 x 400	800 x 600	550 x 400	800 x 600	1.200 x 800	1.700 x 1.000
Max. distance between head and table .							
(Without "C" axis)	mm.	500	600	500	700	800	1.000
(With "C" axis)	mm.	420	520	420	620	720	920
Maximum dielectric height	mm.	265	365	265	365	565	665
Allwable weight on table	kg.	800	1.500	800	1.500	4.000	10.000
Maximum electrode weight (*)	kg.	100	200	100	200	400	400
Maximum electrode weight (with "C" axis) (**)	kg.	50/12	50/12	50/12	50/12	50/12	50/12
Allowable weight on electrode changer (***)	kg.	40/10	50/10	40/10	50/10	50/10	70/10
Generator							
Maximum power	A	60/120	60/120	60/120	60/120	60/120	60/120
Minimum surface finish	VDI	0	0	0	0	0	0
CNC							
Input method		Keyboard,RS-232 C					
Display		14" CRT (colour)					
Minimum programable and controllable increment		0.001 mm/0.001°					
Memory capacity (optionally expandable up to)		512 Kb / 2MB RAM					
Keyboard		Membrane, dust resistant					
Floppy disk unit		3.5"					
Dielectric							
Total capacity	L.	580	1.260	580	1.260	1.650	3.400
Filter system		paper	paper	paper	paper	paper	paper
Filter level	µm	1	1	1	1	1	1
Change of filter elements	hours	>10.000	>10.000	>10.000	>10.000	>10.000	>10.000
Flushing method		Automatic (optional)					
General characteristics							
Total weight	kg.	3.000	5.100	3.000	5.100	7.000	9.000
Total surface	mm.	2.450x2.420	2.700x2.800	2.450x2.420	2.700x2.800	3.500x3.300	4.000x4.530
Maximum height	mm.	2.565	2.765	2.565	2.765	2.880	3.200
Maximum power raiting (****)	KVA	10/13,5	10/13,5	10/13,5	10/13,5	13/15	13/15

(*) On electrode holder plate (**) Stattic/Dynamic depending on geometry (***) Total weight/Unit max. (****) 60/120 Amp.

Options

- Linear electrode changer with 4 to 12 stations (models CS300 / HS300), 6 to 20 stations (models CS400 / HS400), 8 to 22 stations (models HS600), 10 to 30 stations (model HS700).
- Rotary type electrode changer with sixteen positions.
- C – axis
- Robotized flexible handling systems for electrode and workpieces.
- Telemonitoring and remote control.
- Dielectric cooling device.
- Current voltage stabilizer.
- 240 Amp generator

• Owing to our continuous revision in technology and design, ONA ELECTROERISON reserves its right to introduce eventual modifications in the specifications printed in this catalogue without prior notice.

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