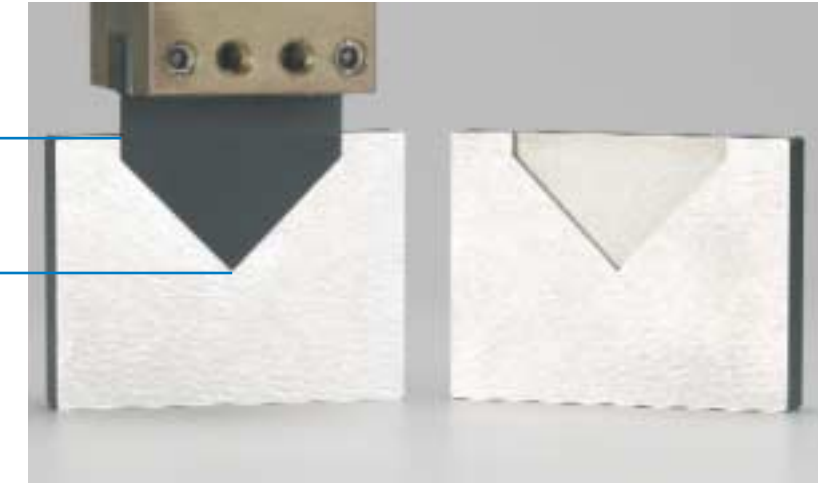
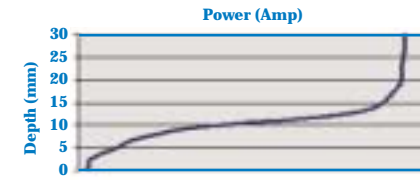


ONA ■ NX400

High-speed die-sinking EDM of high precision and easy automation



SAAC system: Top performance and full automation with evolutive surface electrodes

The SAAC (Surface Automatic Adaptive Control) system, forming part of the new generator in the NX 400 machine, maximizes generator performance in erosion work involving evolutive surface electrodes. It adjusts erosion intensity to suit the useful area being eroded, and is particularly apt where the workpiece has little area at the outset. It will operate without special programming or any other initiative on the part of the user, since it is entirely a part of the Expert System in the CNC.



A friendlier, more powerful CNC with ethernet connection

The CNC that comes with an ONA NX400 unit makes for easy, intuitive programming.

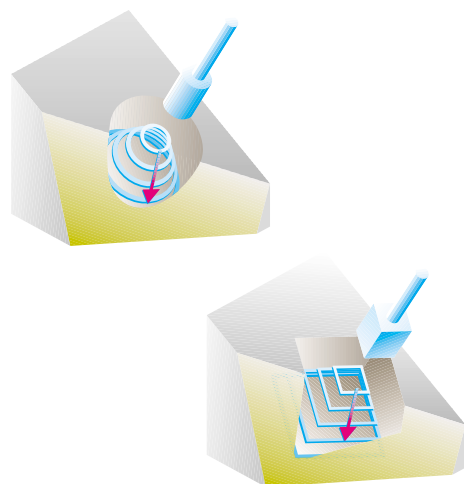
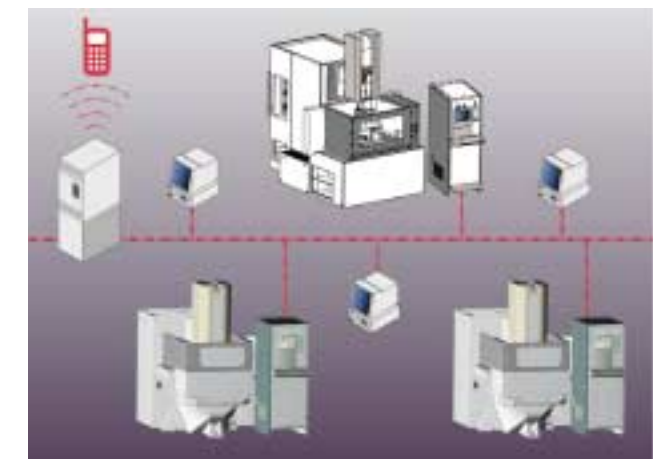
The RJ45 connector and the ethernet card, that is standard with the ONA NX 400 units, mean a major breakthrough in control and automation, so that they can form part of a Local Area Network (LAN). Off-site transmission of automatic messages.

Effective and affordable automation

The new ONA NX400 is designed to automate all type of works in a simple and effective way.

The powerful CNC that the machine incorporates, combined with an automatic electrode changer with 40 stations (ø 51 mm) and a manual pallet-changer for workpieces, allows the possibility of automating the most complex jobs at an affordable cost.

The user has remote access, in real time, to messages that the machine transmits in the normal course of work. These messages are sent automatically by the CNC to an e-mail address specified by the user. He is thus able to receive via PC or mobile telephone.



Some of the features of this model:

- New, quicker, friendlier CNC with the new function A-SPACE (Axis for erosion in SPACE). With this function, any programmable CNC erosion function (spheres, taper machining, orbital machining, vectors, etc.) can be carried out in any spatial direction.
- The high-speed pulse technology found in this unit facilitates major advances in performance, precision and quality.
- CNC with technology tables and specific strategies for grooves (VDI 22 in 100 mm deep grooves).
- CNC with technology tables specifically intended por large surface areas (VDI 20 on 225 cm²).
- CNC with Expert Erosion System that ensures 100% performance without supervision (with surface finish to VDI = 0).
- Fixed bedframe machine, so that the weight of the workpiece rests directly on the frame. Maximum workpiece weight: 1500 kg.

Specifications

Machine

NX 400

"X" axis	mm	600
"Y" axis	mm	400
"Z" axis	mm	400
"C" axis	°	360

Working tank

Tank dimensions	mm	1.200 x 800 x 450
Work table dimensions	mm	800 x 600
Max. distance between head and table (without "C" axis)	mm	680
(with "C" axis)	mm	600
Max. dielectric height	mm	420
Allowable weight on table	kg	1.500
Max. electrode weight (*)	kg	200
Max. electrode weight (with "C" axis (**))	kg	50/12

Generator

Maximum power	A	60 / 120
Minimum surface finish	VDI	0

CNC

Display	15" TFT (colour)
Minimum programable and controllable increment	0.001 mm / 0.001°
Pointer	Trackball
Keyboard	Membrane, dust resistant standard
Remote control	

Dielectric

Filter system	paper	
Filtering quality	µm	1
Change of filter elements	H	>10.000
Sludge extraction	automatic	
Total capacity	L	1.260

General characteristics

Total weight	kg	4.900
Total surface	mm	3.120 x 2.480
Maximum height	mm	2.710
Maximum power rating KVA (***)	KVA	10 / 17,5

Options

- "C" axis
- Linear electrode changer with 8 to 24 stations
- Rotary type electrode changer with 40 stations (ø 51 mm).
- Dielectric cooling device
- Current voltage stabilizer
- Generator of 120 Amp

Control unit functions

General

- Up to four axes simultaneously controlled.
- Linear, circular and helicoid interpolation.
- Integral control of the process through the power supply.
- External interface: USB (mobile flash disk), RJ 45 connector and Ethernet.
- Off-site transmission of automatic messages by the CNC to a PC or mobile telephone.
- Alarms and diagnostics displayed on the TFT (program registers, time of the orbits, time of the regimes, etc.).
- Display in real time of the orbit that is being executed.
- Execution: Manual/Automatic/Single block/Dry run/Machine locked.
- Positioning: Manual incremental/ Manual continuous/ Automatic by program.

Programming

- Programming language: ISO standard assisted or ASCII.
- File system for several types: programs, technologies, offsets, traverses, compensations and historics. File browser.
- Strategies: Automatic program generation. User's technological tables.
- Technology tables and specific strategies for grooves.
- Technology tables specifically intended for large surface areas.
- User's technological tables
- Simultaneous programming during machining.
- All generator parameters are accessible and programmable.
- External automatisms controlled by program.
- Programmable centering tolerance.
- Linear motion axes can be interchanged by program.
- Dwell: programmed as a time function or as input state function.
- Cartesian and polar coordinates (vectors).
- Macros and subroutines.
- Jumps: conditional and not conditional. Repetition function.
- Variables.

Preparatory functions

- A-SPACE function (Axis for erosion in SPACE). With this function, any programmable CNC function (spheres, taper machining, orbital machining, vectors, etc.) can be carried out in any spatial direction.
- Automatic edge positioning.
- Internal and external centering in any plane.
- Machine reference search in all axes.
- Inches/metric full conversion.
- Absolut/Incremental modes.
- Axis displacement (each 0.001 mm).
- Pattern rotation (each 0.001°).
- Mirror image (independent X,Y,Z).
- Electrode center error deviation compensation.
- Vertical and horizontal gap compensation.
- C-axis lock by program.
- Electrode radius compensation.
- Continuous/Intermittent/Vacuum flushing.
- Automatic origin return.
- Automatic switching off.
- Automatic switching on after power failure.
- Anticollision. It avoids the possibility of the electrode to be broken on the event of a collision with the workpiece.

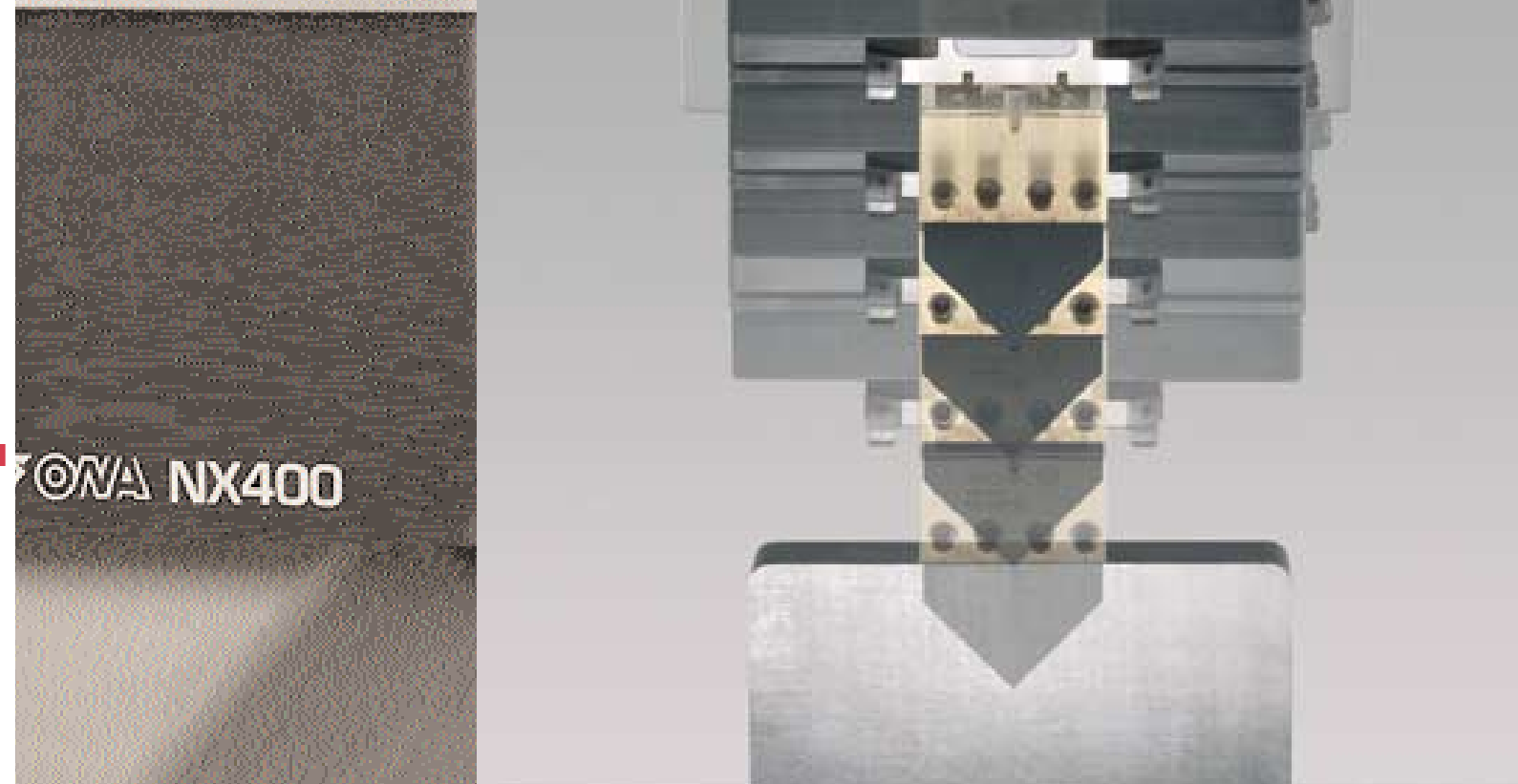
Canned cycles

- Orbital machining (circular and square).
- 3D orbital machining.
- Taper machining (increasing or decreasing).
- Spherical machining.
- Helical machining (internal or external).
- Vectorial machining.
- Erosion angle in the space / Subsurface injection function.

(*) On electrode holder plate (**) Static / Dynamic depending on geometry (***) Power rating for each generator: Generator of 60 Amp / or 120 Amp.



ONA NX400



• With our commitment to up-to-date technology and design, ONA ELECTROEROSION reserves its right to introduce modifications in the specifications printed in this brochure without prior notice.



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