simply genius

genius NOVA series

The next dimension of eroding

EDM

The *genius* NOVA model series
Eroding in a new dimension

With the *genius* NOVA model series, you can explore an entirely new eroding terrain. And that in every respect: No matter whether speed, accuracy/precision, stability or flexibility. Both new *genius* **750** NOVA and *genius* **900** NOVA machines can justifiably be referred to as the best of their class. The compact substructure made of mineral casting ensures steady work results, even in case of temperature fluctuations in the environment.

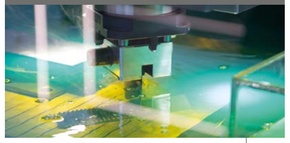
Faster, more precise, *genius* NOVA.

The fundamentally new developed machine leaves nothing to be desired: High speeds in all axes. At the same time, low-wear erosion with copper or graphite as well as steady process runtimes are ensured. The new *genius* NOVA model series impress each user with stunning precision, speed and flexibility.

The features at a glance:

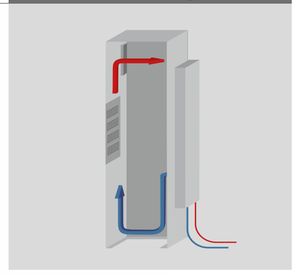
- Simultaneous 8 axes operation
- Manual eroding for teaching electric discharge machining via manual control with joystick function
- LCD display and Windows 10 touch monitor
- High vibration dampening due to mineral casting
- Permanently filled moveable working tank
- Acceleration 1G 10 m/sec²
- Highest erosion performance and precision for all material pairs
- Wear-free final dimension tuning
- Thermo-symmetric mineral cast construction
- Fully enclosed integrated measuring systems
- Integrated electro cabinet cooling (air-water heat exchanger)
- Fully temperature-controlled machine frame (optional)
- LED status display (optional)
- Fully integrated workspace lighting (optional)
- Freely programmable flushing (optional)
- Automatic central lubrication (optional)

Integrated workplace lighting



Display for active process monitoring

Integrated electro cabinet cooling (air-water heat exchanger)

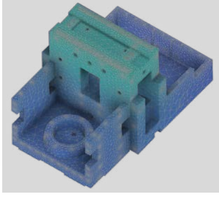


Machine control

- Control via touch screen
- Fully integrated job manager possible
- Direct import of CAM data for program creation (no manual programming necessary; optional)

Loading by cran possible

Thermo-symmetric mineral cast construction



Control panel electrically height-adjustable

New handheld terminal *genius* NOVA

- Ergonomically shaped
- Two approval buttons for left- and right-handers
- Large LCD display
- Digital handwheel for manual target positioning
- Connection cable of individual lenght (standard 8 m)
- Fully integrated 4 axes joystick control

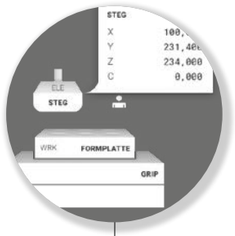
LCD display
- Indicates machine status, current axis position

Digital handwheel
- For manual target positioning

* Note: All image descriptions apply to both, the *genius* **900** NOVA and the *genius* **750** NOVA.

The next dimension of machine control:

Simple, clear, perfect.

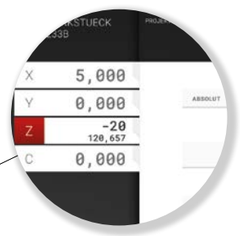


3D VISUALISATION OF THE COORDINATE SYSTEMS

- *Direct overview of changed / activated pallets, workpieces and electrodes.*
- *Quick access to associated offsets.*

OPERATING FLOW IN SIGHT

- *The operation of the interface, including the management of parts, positioning, measuring, programming and the actual eroding process, follows natural processes (intuitive user guidance).*
- *Quick change within the applications via icons.*

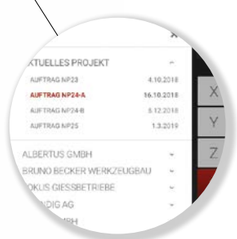


EASIER ORIENTATION VIA AXIS REPRESENTATION

- *A combination of the actual and nominal value for each axis provides you with a quick overview of where the machine is at the moment and which position is approached next.*
- *In this way, positioning becomes easier and more intuitive.*

QUICKLY POSITIONED: WITH INCREMENTAL AND ABSOLUTE VALUES

- *A clear identification for the entry via corresponding buttons in combination with a colour coding facilitates the distinction between absolute and incremental values for positioning.*



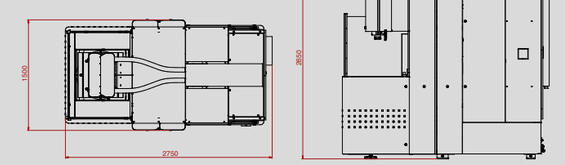
DIRECT ACCESS TO PROJECTS AND JOBS

- *With one click to the project and job management*
- *Intelligent search: Name and / or planned date as well as directly for specific entries.*

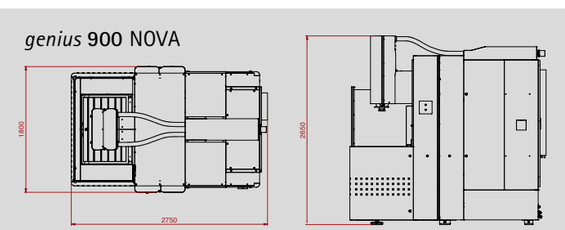
Machine data	*genius* 750 NOVA	*genius* 900 NOVA
Height	2650 mm	2650 mm
Width	1500 mm	1800 mm
Depth	2750 mm	2750 mm
Total weight (w / o fluids)	ca. 6400 kg	ca. 7000 kg
Table: Length x width	600 x 600 mm	900 x 600 mm
Dielectric fluid above table	450 mm	450 mm
Dielectric filter	1 central filter	1 central filter
Workpiece weight	700 kg	1000 kg
T-slots: number / width / distance	6 slots / 10 mm / 83/100/100/100/83 mm	6 slots / 10 mm / 83/100/100/100/83 mm
Distance: Table - sleeve	550 / 150 mm	550 / 150 mm
w / o chuck max. / min.	opt. 660 / 260 mm	opt. 660 / 260 mm
Travel distance X - Y	420 x 420 mm	720 x 420 mm
Travel distance Z	400 mm	400 mm
Resolution X - Y - Z	0,001 mm	0,001 mm
Rapid travers rate X -Y	20 m / min	20 m / min
Rapid travers rate Z	20 m / min	20 m / min
Electrode weight	max. 100 kg	max. 100 kg
Dielectric fluid consumption	420 litres	560 litres
Number of adjustable feet	3 pcs. + 2 columns	3 pcs. + 2 columns
Weight per foot	ca. 2,5 t	ca. 2,9 t
Required cooling power	4,5 kW	4,5 kW
Floor load	ca. 1,45 N/mm²	ca. 1,65 N/mm²
Space of base plate	1x Ø150 mm, 2x 150x150 mm	1x Ø150 mm, 2x 150x150 mm
Flow rate (air)	10l / min	10l / min
Required air pressure	min. 6 bar	min. 6 bar

Generator data	*genius* 750 und 900
Control system generator	*IPM*tec *(integr.)*
Operating current	52 A in total optional 100 A in total (+ 48 A) Booster 196 A in total (+ 96 A)
Suction capacity	6 KVA / 400 V / 50 Hz
Handling	Stand alone operator panel with keypad, mouse and *genius* NOVA handheld terminal
Screen	22" Touchscreen
Screen	IPC Intel Windows 10
Control system machine	own RISC-CPU with 1.2 GHz and 64 Bit
Gap monitoring	own RISC-CPU with 1.0 GHz and 64 Bit
Engine control	Digital controller for AC-servomotors
Interface	LAN-TCP/Internet protocol, USB, RS 232

genius 750 NOVA



genius 900 NOVA



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MARKENRAUM, Design & Kommunikation, Darmstadt, Germany. 12|2019