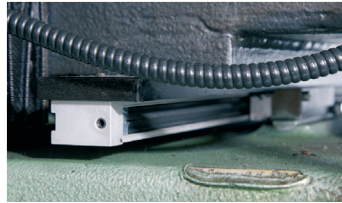


AEG ELOTHERM

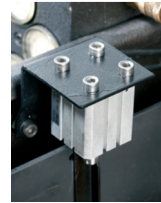
The machine was put into full operation to repair dies. Frequent failures recently occurred and an expensive foreign service, after a long time, only resolved the immediate problem without improving reliability. Therefore, we decided to do a total upgrade. On the basis of the excellent result achieved, the management decided to upgrade other die-sinking machines too. Over time, the management availed of the offer to replace the Z-axis motor, upgrade the generator and install automatic level control. The machines are currently configured to provide a full-scope erosion of graphite ribs and cavities. Some special operations required adding specific functions and creating user macros and screens – no problem for a new control system.



New Z-axis motor on the left. At the bottom: Position sensors are replaced when the original measuring device is damaged.



Using automatic level control also for the old machine. A new control system box on the right.

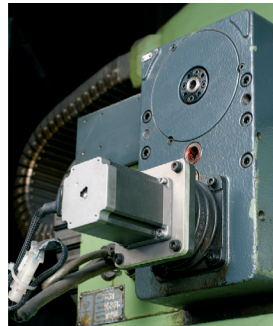


It's old,

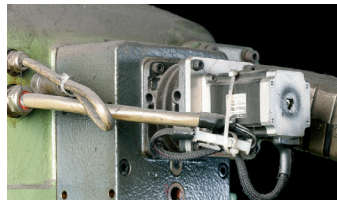
DECKEL DE 25

Due to its non-functional electronics, the machine was left unused and shut down for a long time. A total upgrade was the only possible way to put the machine into operation. With regard to the operations to be performed by the machine and the options offered by our control system, an economical solution was agreed upon. The latest alternating-current motor was used for the main erosion axis to ensure fast lifting and efficient flushing; a cheap solution by means of stepper motors connected in a closed loop with metering rulers was used for the X-axis and Y-axis.

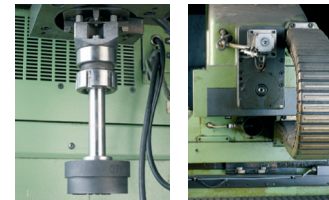
The machine is equipped with an automatic filter unit and retractable tank. With quality mechanical design, the upgrade led to a several-fold increase of the value of this machine. The machine has been running reliably for several years.



Old stepper motors replaced by new advanced motors. A cheap and reliable solution!



Combination of various types of motors is not a problem (stepper, DC, AC). The solution is functional, cheap and 100% reliable.



...but it will be better than when it was new.

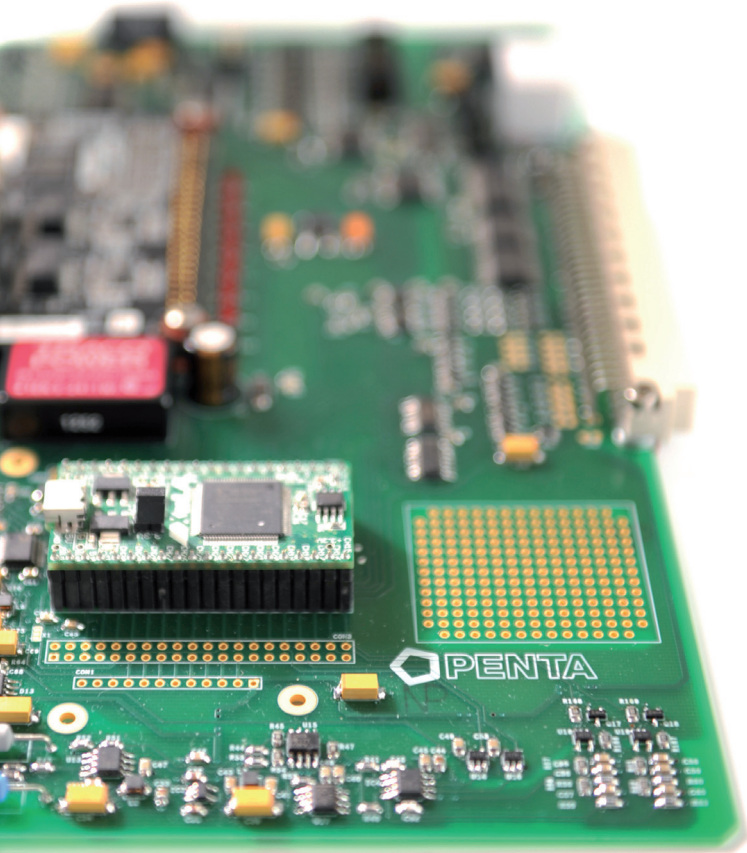
RETROFITTING AND MODERNISATION OF ANY EDM DIE-SINKING MACHINE

You will always be satisfied with machines from PENTA.

PENTA[®]
TRADING

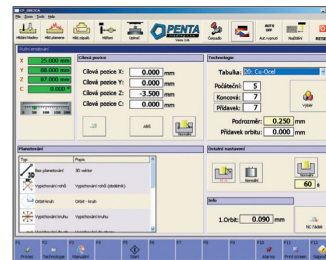
GENERATOR

- EDM current from 0.5 A to 300 A
- Variable curve control of each pulse on the basis of spark-gap condition – early ARC prevention
- Multi-stage ARC and short-circuit protection – maximum priority for electrode protection
- High speed
- Low electrode wear
- Special technology for graphite ribs and deep cavities including finishing
- Polishing operations
- Ready for erosion of Amco, Ti and Inconel
- Very simple design – only 1 generator board and 1 control board
- Modern design based on FPGA circuit
- High speed jump
- Wearless technology

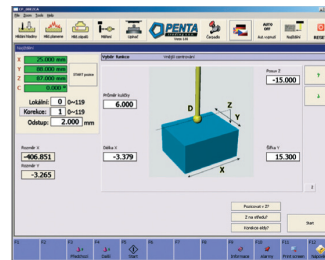


PENTA CNC CONTROL SYSTEM

- 15" LCD touch screen with Windows CE system – guaranteed compatibility
- Arbitrary control language exchangeable in process
- Many orbiting cycles, easy possibility of defining own shape, 3D orbiting
- Automatic measuring cycles – easy to extend by job type
- Downloading positions from DXF/CSV file
- Direct data export to DXF/STEP/CSV file
- Correction table for electrodes with automatic identification option – data download from measuring machine
- Easy programming even during eroding process, possibility of using subprograms and macros, on-line calculations, jumps, repeats; using variables – opens new CNC programming options
- Optional screens for user setting, open system for own modifications
- Easy-to-extend parameter and diagnostic sets
- Context-sensitive help for all screens, settings, parameters as well as own macros
- Remote diagnostics via Internet and LAN directly from service centre
- Supervisory functions – status report (SMS/e-mail), shared desktop, operation effectiveness monitoring, application for PDA
- LAN 10/100/1000 network connection, data transfer via FTP service, or connection as external disc (SMB), USB-port on machine panel – failure-free integrity into your network
- Temperature monitoring, controlled fans depending on residual heat, quiet running, minimum thermal load, low input – savings in operation



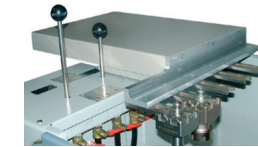
Manual erosion setting screen



3D rotation of local coordinate system

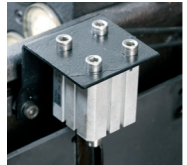
ADDITIONAL EQUIPMENT

C-axis for large and heavy electrodes. Maximum rigidity and strength, also designed for electrodes with a high moment of inertia.



Automatic electrode changer with motor-driven feed. Smooth travel to desired position, variable number of holders as well as selectable travel length.

Automatic dielectric level control. Maintenance-free and unattended operation with automatic height setting by Z axis.



Cooling to increase machining accuracy.

For other optional equipment please visit our website or contact us.



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