



TRAINING PROGRAMME

BASIC TRAINING *EAGLE* POWERTEC

- Basics of EDM technology
- Electrode preparation
- Workpiece coordinate systems / Electrode correction values
- Automatic and manual control functions
- Programming system Multiprog / *EAGLE* PowerSPARK Editor
- Technology of the *EAGLE* PowerTEC-control system
- Options for intervention in the running process

Duration: 4,5 days

AUTOMATION TRAINING *EAGLE* POWERTEC

- Basics of EDM technology
- Electrode preparation
- Workpiece coordinate systems / Electrode correction values
- Automatic and manual control functions
- Programming system Multiprog / *EAGLE* PowerSPARK Editor
- Technology of the *EAGLE* PowerTEC-control system
- Order and part management
- Identifying programming
- External correction value detection
- Options for intervention in the running process

Duration: 4,5 days

BASIC TRAINING MULTIPULSE 64-BIT

- Basics of EDM technology
- Electrode preparation
- Workpiece coordinate systems / Electrode correction values
- Automatic and manual control functions
- Programming language ESPER II
- Technology of the Multipulse 32/64 bit-control system
- Instruction in the programming software Multiprog
- Options for intervention in the running process

Duration: approx. 4 days at your site

ADVANCED TRAINING 32/64-BIT

- Difference between the 32bit and 64bit Multipulse control
- Installation of the programming software if required
- Layout of keyboard and control unit
- Set-up functions for electrodes and workpieces
- Programme and technology configuration
- Special functions of the control

Duration: approx. 2 days at your site

AUTOMATION TRAINING MULTIPULSE 32/64-BIT

- Basics of EDM technology
- Electrode preparation
- Workpiece coordinate systems / Electrode correction values
- Automatic and manual control functions
- ESPER programming language
- Technology of the Multipulse-control
- Instruction in the programming software Multiprog
- Order and part management
- Identifying programming
- External correction value detection
- Options for intervention in the running process

Duration: 4 days at your site

BASIC TRAINING MULTIPULSE 32-BIT

- Basics of EDM technology
- Electrode preparation
- Workpiece coordinate systems / Electrode correction values
- Automatic and manual control functions
- ESPEP programming language
- Technology of the Multipulse-control
- Instruction in the programming software Multiprog
- Options for intervention in the running process

Duration: approx. 4 days at your site

DIN/ISO-PROGRAMMING

- Program-structure
- Coordinate systems
- Editing functions
- Measuring-makros
- Contour programmes
- Special orbit programmes (depending on control type)

Duration: 1 - 2 days (depending on requirements and agreement)

EDM WITH GRAPHITE ELECTRODES

- Graphite qualities
- Application fields of graphite
- Effect of graphite selection on the process parameters
- Advantages and disadvantages of graphite compared to copper
- Programming and eroding with graphite

Duration: 1-2 days (depending on requirements and agreement)

This training is intended for companies wishing to use graphite as a new electrode material and is based on examples selected by OPS-INGERSOLL.

BASIC TRAINING EDM

- What is spark erosion?
- Characteristics of spark erosion
- Electrode materials (possibilities and limits)
- Workpiece materials (steel, aluminium, special materials)
- Programme and technology configuration (EAGLE PowerTEC)
- Selection of electrode-undersize

Duration: 1-3 days (depending on requirements and agreement)

ADVANCED TRAINING

- Intensification of the basics
- Optimising generator parameters
- Discussion of your specific erosion tasks with advice from our application engineers

Duration: 1 - 2 days (depending on requirements and agreement)

MULTIPROG - TRAINING

- Installation and Parametrierung
- Technology creation
- Workpiece materials
- Electrode geometries
- Suggestions for undersize of electrodes
- Starting-steps
- Rear-cuts and limiting of retraction
- Taper-angle of electrodes
- Electrode length compensation
- Import functions

Duration: 1-2 days (depending on requirements and agreement)

BASIC TRAINING HSC

- Switching the machine on/off
- Searching for/approaching reference points
- Approach workpieces, set zero points
- Create and change tool table
- Create user database (depending on control type)
- Read in, edit, adapt, call up, start, interrupt and cancel programmes
- Restart in the programme
- Introduction of Look-Ahead / or Cycle 332
- Calibration of probe and measuring kinematic
- Emergency stop situation
- Control/process 4th/5th axis
- The course does not include programme creation

Duration: 2,5 days

AUTOMATION TRAINING PERFORMANCE HSC

- Basic training HSC
- Job and part management
- Chip reading system (if available)
- IMC loading system
- The course does not include programme creation

Duration: 4,5 days

AUTOMATION TRAINING LIGHT HSC

- Basic training HSC
- IMC loading system incl. manual operation, release from error situation and status synchronisation
- The course does not include programme creation

Duration: 3,5 days

AUTOMATION TRAINING LIGHT CHIP-ID HSC

- Basic training HSC
- OIPM database
- IMC loading system incl. manual operation, release from error situation and status synchronization
- The course does not include programme creation

Duration: 4,0 days

PRECISION PACKAGE 3 PP3 HSC

- Requirements
- Performing the calibration
- Cycle 320 (if existent)

Duration: 0,5 days

INTRODUCTION HIGH SPEED MILLING

- HSC - Milling strategies
- HSC - Cutting tools

Duration: 1-2 days (depending on requirements and agreement)

This training is intended for companies that are new to HSC milling. It follows up on the basic training for operating the machine. Basic strategies and the correct use of milling tools are taught, using machining examples selected by OPS-INGERSOLL. This introduction is not a substitute for competent and detailed assistance from a milling tool manufacturer and a system-specific CAD/CAM training.

PLEASE CONTACT US

**FOR AN INDIVIDUAL ARRANGEMENT
FOR YOUR DESIRED TRAINING.**