CLOOS – Seminar catalogue

Seminars by CLOOS – learn from specialists!

CLOOS

Weld your way.

Content

... in all industries!

Thorough Training

in the fields of welding power sources, robot technology and process technology.

CLOOS have been involved as robot operators for about three decades and attach as great an importance to a thorough training in robot and welding technology as the majority of end users In addition our customers are kept up-to-date due to a continual flow of information from CLOOS subsidiaries and agencies in Germany and abroad.

Seminars by CLOOS – learn from specialists!

Secure a thorough training in the field of robot and welding technology. The seminars take place in small groups and under real conditions.

The participants are trained in programming and operation in the modern, well equipped CLOOS seminar centre. The seminars take place in small groups and under real conditions. In team work customers, you are prepared for the special demands of robot technology with the aid of components, which are similar to those used in practise.

Seminar series Robot Programming

Programming of QIROX welding robots

It is decisive to train the employees well to use the robot technology in a competent and efficient manner. In our seminars users get familiar with the safe operation of the robot. You reinforce the knowledge and skills learnt by practical exercises in small groups using real robot systems and concrete technical components.

Seminar series
Robot programming

Operator – Operator at the robot

This seminar is for robot operators. Get familiar with the basics to edit, correct and maintain the robot programs. Learn, among others, everything about robot programming, welding functions, signalling technology, program functions and system settings.

Seminar period
3 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Content

- Learn everything about the structure of a robot welding system.
- Get familiar with the components of the industrial robot (controller, drives, mechanics, external axes, accessories).
- Identify the axes and degrees of freedom of the QIROX robots.
- Get familiar with the normal conditions and principles of the controller.
- Use different operating modes of the robot controller.
- Interpret messages, warnings and errors.
- Use the TEACH programming function.
- Execute test runs of user programs.
- Insert and change programmed points.
- Adjust the welding equipment and keep it in operation.
- Organise and administer user programs.

Target group

- Users who are in charge of the robot handling
- Robot operators

Conditions

- none

Weld your way.

Seminar series
Robot programming

Robot programming
Basic Course

This seminar is for robot programmers. Learn everything about the robot handling. Get familiar, among others, with the structure of a welding system, the components of the industrial robot, the operating modes of the robot controller and the check and maintenance of the welding equipment.

Content

- Identify axes and degrees of freedom of the QIROX robots.
- Explain and apply the programming functions.
- Program via the teach pendant menu.
- Create a functioning welding program.
- Do test runs and corrections of user programs.
- Create welding parameter lists and optimise weld seams.
- Interpret user-specific warnings and error messages.
- Correct programmed points.
- Adjust the welding equipment and keep it in shape.
- Organise and administer user programs.

QR-TR-P1

Seminar period
5 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 − 12:00 a.m.

Participants
Small groups up to a maximum of 6 persons

Target group

- Users who have to edit, correct and maintain the robot programs
- Robot programmers

Conditions

- Basic knowledge of welding technology
- Ability to imagine the sequence of automatic operating cycles
- Technical understanding of material treatment and machining (processing)

Seminar series
Robot programming

Robot programming
Advanced Course

This seminar is for robot programmers. Get familiar with further application possibilities to edit, correct and maintain the robot programs. Among others, you learn everything about the coordinate system, the Cartesian shifting of spatial points, the synchronisation of external axes, transformation and mirroring of user programs and many more customer-related options.

Content

- Synchronise the external robot axes.
- Use different coordinate systems (base-, hand-, workpiece coordinate system).
- Transform, mirror and shift programs online.
- Organise customer-related options in the user program.
- Calculate with variables.
- Generate a welding program with variables and external axes.
- Create a user program incl. options.
- Generate and export working points via program commands.
- Program the tactile gas nozzle and the arc sensor.

QR-TR-P2

Seminar period
5 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 6 persons

Target group

- Users who have to edit, correct and maintain the robot programs
- Robot programmers

Conditions

- Completion of the course: QR-TR-P1 Programming Basic Course

Seminar series Service and Maintenance

Service and maintenance at the QIROX robot

It is decisive to train the employees well to use the robot technology in a competent and efficient manner. In our seminars users get familiar with the safe maintenance and repair of robot systems. You reinforce the knowledge and skills learnt by practical exercises in small groups using real robot systems.

Seminar series
Service and maintenance
at the QIROX robot

Service and maintenance at the QIROX robot for electricians

This seminar is for maintenance personnel, electricians and service technicians. Learn everything about maintenance, fault finding and repair work of the robot system. Learn how to find and eliminate error causes quickly.

Content

- Learn everything about the structure and components of robots (controller, drives, mechanics).
- Get familiar with different operating modes (Off, manual, reduced/high speed, Auto).
- Create test programs.
- Get familiar with operating and programming elements and their interfaces.
- Explain block diagrams.
- Exchange component groups (e.g. plug-in cards, power supplies).
- Adjust functional groups (e.g. servo controllers).
- Find and repair the error causes.
- Take preventive maintenance measures at the robot (lubrication and greasing).

QR-TR-SEL

Seminar period
3 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 − 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Target group

- Users who are in charge of maintenance, fault finding and repair work on the robot system
- Maintenance personnel, electrical and service engineers

Conditions

- Vocational education in the electrical engineering*
* The participant confirms that he/she is a qualified electrician.

Seminar series
Service and maintenance
at the QIROX robot

Service and maintenance at the QIROX robot for mechanical engineers

This seminar is for mechanical maintenance engineers. Learn everything about maintenance, fault finding and repair of the robot system. Get familiar with the structure of the robot mechanics, the setting possibilities of the individual axes and the adjustment possibilities of the robot mechanics.

Content

- Explain the functioning of the robot mechanics.
- Get familiar with the setting possibilities of the axes.
- Adjust the robot mechanics via the "electronic spirit level".
- Explain the meaning of "rough and fine adjustment".
- Set "axis backlash" at the three manual axes.
- Execute maintenance and inspections.
- Get information on lubrication, greasing and lubricants.
- Check the functions of the mechanical brakes.

QR-TR-SEM

Seminar period
1 day

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Target group

- Users who are in charge of maintenance, fault finding and repair work on the robot system
- Mechanical maintenance engineers

Conditions

- Completed vocational education in a mechanical profession

The way ...

Consulting
With this comprehensive "pre-service", we take care of your project from the beginning and transfer our integrated process expertise to your component..

Planning
We elaborate a solution which perfectly meets your individual requirements.

Design
Due to the modular design of our product series we develop customised solutions which meet all your production requirements.

Production
Welding machine and robot technology is our strength - including our core competence: the arc.

Commissioning
Our specialists carry out the installation step-by-step in your production hall and test your system for faultless functionality.
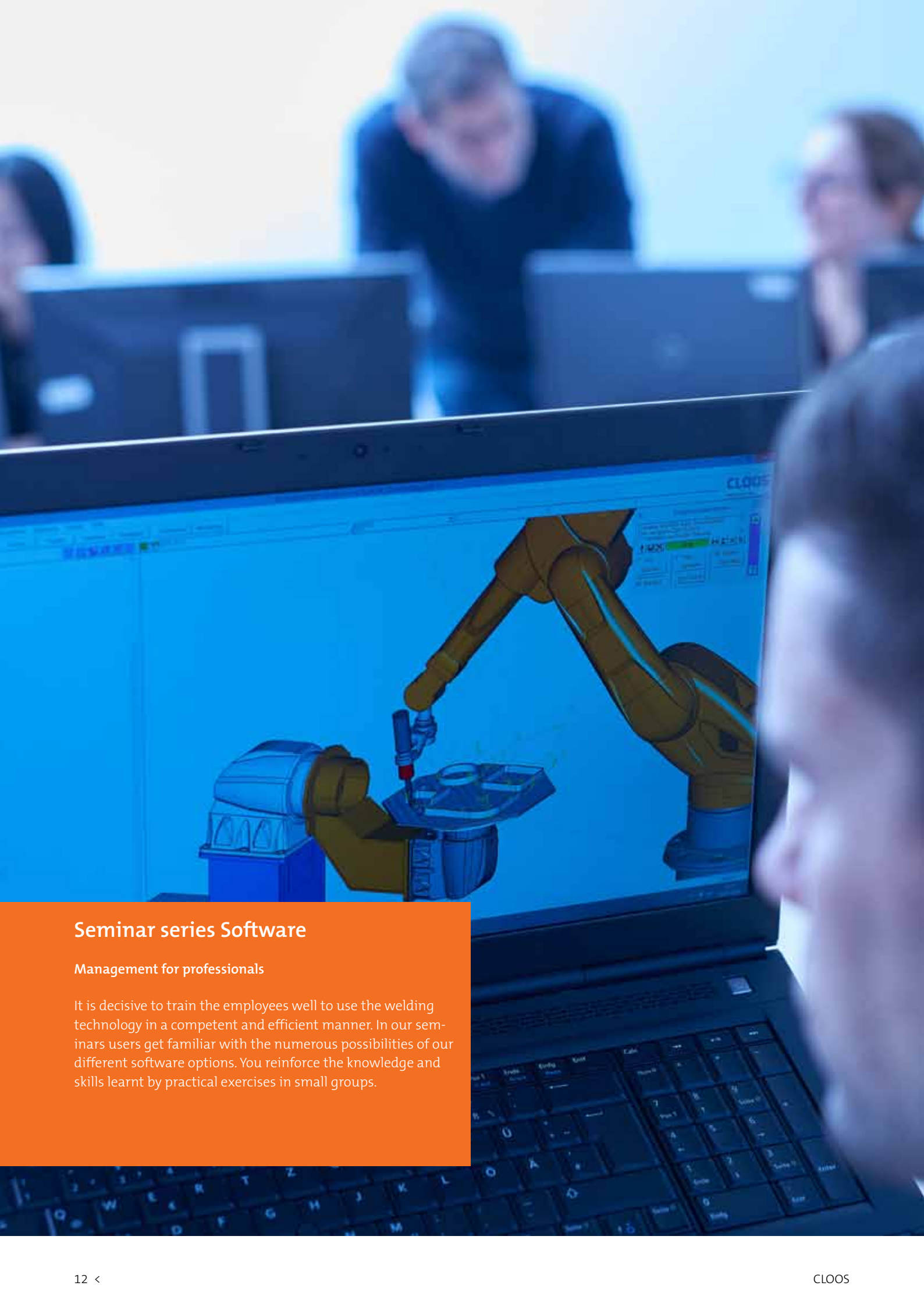
Training
We train your employees and service technicians in programming, operation and maintenance in our modern training centre

Service
Our competence team advices you on any extensions, modifications and retrofits of your existing robot and welding systems.

... to your success.

Seminar series Software

Management for professionals

It is decisive to train the employees well to use the welding technology in a competent and efficient manner. In our seminars users get familiar with the numerous possibilities of our different software options. You reinforce the knowledge and skills learnt by practical exercises in small groups.

QIROX Software – Offline programming with RoboPlan

This seminar is for robot programmers and users who have to edit, correct and maintain the robot programs. Learn everything about offline programming with RoboPlan. Among others, you learn how to operate the graphical surface, to handle the programming functions and to create user programs offline via RoboPlan.

Content

- Operate the graphical surface of RoboPlan.
- Use the programming functions of the offline programming system.
- Import and position components.
- Create and modify paths and points.
- Simulate and check programs.
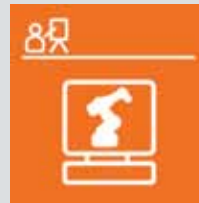- Create simple user programs offline via RoboPlan.

QR-TR-RPL

Seminar period
5 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Target group

- Users who have to edit, correct and maintain the robot programs
- Robot programmers

Conditions

- Completion of the course: QR-TR-P1 Programming Basic Course
- Completion of the course: QR-TR-P2 Advanced Course
- PC knowledge

Seminar series
Software

QIROX software – PDM, UMS, RSM, Carola EDI

This seminar is for robot programmers and users who have to edit, correct and maintain the robot programs. Learn how to use the different QIROX software products perfectly. Learn everything about system requirements, installation and setting, analysis possibilities and data management.

QR-TR-SP

Seminar period
1-2 days per module

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Content

PDM – Process Data Monitoring

- Get familiar with the software and the system requirements.
- Install the software and set-up the QIROX network.
- Display the current system state.
- Evaluate the times.
- Analyse the component and the weld seams in detail.
- Create component protocols and administer the data.

Carola Edi - Carola Editor

- Get familiar with the software and the system requirements.
- Install the software and set-up the QIROX network.
- Display the current system state.
- Use Carola Edi to communicate with the robot controller.

RSM - Remote Service Manager

- Get a special safety briefing for the RMS application.
- Get familiar with the software and the system requirements.
- Install the software and set-up the QIROX network.
- Display the current system state.
- Establish a connection and evaluate diagnostics data.

UMS - User Management System

- Get familiar with the software and the system requirements.
- Install the software and set-up the QIROX network.
- Display the current system state.
- Execute the PC and the teach pendant version.
- Document and evaluate the user data.

Target group

- Users who have to edit, correct and maintain the robot programs
- Robot programmers

Conditions

- General knowledge about the functions of the robot system

Seminar series
Software

Software QINEO Data Manager

This seminar is for welding engineers, welding specialists, welding practitioners, machine and system operators, welding supervisors, master craftsmen, foremen and service technicians. Learn everything about the installation, set-up and operation of the QINEO Data Manager software. Find out among others how to administer users and characteristic curves and how to judge and evaluate the cost and quality management.

QN-TR-QDM

Seminar period
Part 1: 1 day
Part 2: 1 to 2 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Content

Part 1: QDM basic functions

- Define and administer users and cells.
- Safe the data and reload them into the welding power source.
- Use QDM to operate welding power sources.
- Administer jobs and SD jobs.
- Read and evaluate welding data logbooks.
- Judge and evaluate the cost and quality management.

Part 2: QDM additional functions

- Install the QDM software.
- Set-up the network.
- Generate a backup and restore.
- Administer users.
- Operate the welding power sources with the QINEO Premium operating module via QDM.
- Administer jobs and SD jobs.

Target group

- Welding engineers, welding specialists, welding practitioners
- Machine and system operators, welding supervisors
- Master craftsmen, foremen, service technicians

Conditions

- General knowledge about the functions of the robot system

Seminar series Laser Programming

It is decisive to train the employees well to use the laser technology in a competent and efficient manner. In our seminars users get familiar with the safe operation of the laser technology. You reinforce the knowledge and skills learnt by practical exercises in small groups using real robot systems and actual technical components.

Robot programming – Online Laser Sensor Basic Course

This seminar is for system operators, robot programmers and users who have to edit, correct and maintain the robot programs. Learn everything about the use of online laser sensors in robot systems. Among others you learn to name the basic components of the laser system, to identify the risks and protective measures of laser radiation and to create simple working programs via online laser sensors.

QR-TR-LT1

Seminar period
5 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Content

- Get familiar with the application possibilities of the sensor system.
- Identify the risks and protective measures of laser radiation.
- Verify and correct the sensor calibration with TCP and TOV.
- Use the commands of the SeamTracker interface.
- Create simple working programs via online laser sensors.
- Create and select templates for online seam tracking.

Target group

- Users who have to edit, correct and maintain the robot programs
- System operators and robot programmers

Conditions

- Completion of the course: QR-TR-P1 Programming Basic Course
- Completion of the course: QR-TR-P2 Advanced Course

Seminar series
Laser Programming

Robot programming – Online Laser Sensor Advanced Course

This seminar is for robot programmers and users who have to edit, correct and maintain the robot programs incl. adaptive parameter adaptation. Intensify the skills you learnt in the basic course. Among others, you learn to name the different adaptive functions, to use the adaptive welding parameter selection in the case of weld tolerances and suitable sensor functions for multi-layer programming.

Content

- Intensify the skills you learnt in the basic course.
- Create adaptive templates via seam tracking software.
- Name the different adaptive function (constant, discrete, linear and complex adaptive control).
- Use the adaptive welding parameter selection in the case of weld tolerances.
- Use suitable sensor functions for multi-layer programming.
- Practise the learned skills of programming examples.

Note: The parameter adjustment is made on the robot system only in simulation mode and without welding technology.

QR-TR-LT2

Seminar period
2 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Target group

- Users who have to edit, correct and maintain the robot programs
- Robot programmers

Conditions

- Completion of the course: QR-TR-P1 Programming Basic Course
- Completion of the course: QR-TR-P2 Advanced Course
- Completion of the course: QR-TR-LT1 Programming Online Laser Sensor Basic Course

Seminar series
Laser Programming

Robot Programming – Offline Laser Sensor

This seminar is for system operators, robot programmers and users who have to edit, correct and maintain the robot programs. Learn everything about the use of an offline laser sensors in robot systems. Among others, you learn to name the basic components of the laser system, to identify the risks and protective measures of laser radiation and to create simple working programs via offline laser sensors.

Content

- Get familiar with the application possibilities of the sensor system.
- Identify the risks and protective measures of laser radiation.
- Verify and correct the sensor calibration with TCP and TOV.
- Create simple working programs via offline laser sensors.
- Create and select templates for offline seam tracking.
- Use manual and menu-guided programming techniques.
- Use working programs with adaptive weld parameter selection.

QR-TR-LS

Seminar period
5 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Target group

- Users who have to edit, correct and maintain the robot programs
- Robot programmers

Conditions

- Completion of the course: QR-TR-P1 Programming Basic Course
- Completion of the course: QR-TR-P2 Advanced Course

Seminar series Welding Power Sources

It is decisive to train the employees well to use the welding power sources in a competent and efficient manner. In our seminars users get familiar with the safe operation of the welding power sources. You reinforce the knowledge and skills learnt by practical exercises in small groups.

Seminar series
Welding power sources

Adjustment QINEO / Quinto

This seminar is for welding engineers, welding specialists, welding practitioners, welders, demonstration welders, master craftsmen, foremen and service technicians. Learn everything about the use of the welding power sources in practice. Among others, you get familiar with different generations of welding power sources and learn how to distinguish different operating modules and their functions, to recognise welding processes, special functions and process limits.

Content

- Get familiar with different generations of welding power sources.
- Distinguish different QINEO operating modules and their functions.
- Judge welding processes and special functions.
- Recognise and judge process limits.
- Select the suitable welding power sources, processes and accessories for customer-related applications.
- Use the welding power sources in practice.
- Adjust the configuration.
- Interpret the diagnostics menu.

QN-TR-E

QINEO/QUINTO

Seminar period
2 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Target group

- Welding engineers, welding specialists
- Welding practitioners, welders, demonstration welders
- Master craftsmen, foremen, service technicians

Conditions

- Basic knowledge of the welding technology

Weld your way.

Seminar series
Welding power sources

Service QINEO / Quinto

This seminar is for service and maintenance staff. Learn everything about maintenance, fault finding and repair work of welding power sources. Among others, you get familiar with the basic functions of the operation and learn how to explain the interplay of the components, to find and repair the error causes.

QN-TR-SE

Seminar period
1 day

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

**Participants**
Small groups up to a maximum of 4 persons

Content

- Learn everything about the basic functions of the operation.
- Get familiar with the structure of welding power sources.
- Explain the functions and the interplay of the components.
- Find and repair the error causes.
- Exchange the component groups (e.g. boards, power supplies, fuses).
- Take preventive maintenance measures.

Target group

- Users who are in charge of maintenance, fault finding and repair work of welding power sources
- Service and maintenance staff

Conditions

- Vocational education in the electrical engineering
- Certificate "Qualified electrician" acc. to VDW 0100
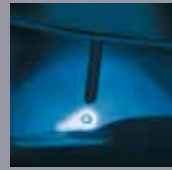- Education as qualified electrician.
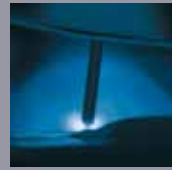
Control Weld
Reliable MIG/MAG welding process for thin and thick materials

Speed Weld
Stable MIG/MAG pulsed arc for numerous applications

Vari Weld
MIG/MAG pulsed arc for optimum welding results even under demanding conditions

Rapid Weld
High-capacity MIG/MAG spray arc for efficient welding

Cold Weld
Heat-reduced MIG/MAG AC pulsed arc for optimum results when welding sensitive materials

Tandem Weld
Combination of two synchronised MIG/MAG arcs for double capacity

Narrow Gap Weld
MIG/MAG process with narrow gap technology for efficient thick plate welding

TIG welding
Reliable process for clean and precise welding

Laser Hybrid Weld
Combination of laser welding and MIG/MAG arc for maximum efficiency and quality

Seminar series Welding Processes

It is decisive to train the employees well to use the welding technology in a competent and efficient manner. In our seminars the users get familiar with the possibilities of the highly efficient processes and learn to use them perfectly.

Robot Welding – Welding with the robot

This seminar is for robot programmers and users who have to edit, correct and maintain the robot programs. Learn everything about welding with the robot. Among others, you learn to apply the different welding processes, to recognise and judge the process limits and to optimise welding parameters at the robot.

Content

- Use different welding processes and arc types.
- Recognise and judge the process limits.
- Program and weld different workpieces.
- Program the welding power source.
- Optimise the welding parameters at the robot.
- Get familiar with the correct machine equipment.
- Optimise the robot user programs.
- Recognise welding errors.

QR-TR-RW

Seminar period
3 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Target group

- Users who have to edit, correct and maintain the robot programs
- Robot programmers

Conditions

- Completion of the course: QR-TR-P1 Programming Basic Course

Seminar series
Welding processes

Tandem Weld – Tandem welding with the robot

This seminar is for robot programmers and users who have to edit, correct and maintain the robot programs. Learn everything about Tandem welding with the robot. Find out among others how to optimise the Tandem parameters, to determine the Tandem welding torch settings and to use the Tandem welding torch to weld sample workpieces.

QR-TR-TW

Seminar period
2 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Content

- Explain the Tandem weld process.
- Program Master and Slave wire.
- Show the differences between synchronous and asynchronous pulses.
- Carry out basic settings on the welding machine.
- Determine Tandem torch settings.
- Optimise operating modes and parameter settings.
- Maintain and adjust cable assemblies and torch cable assemblies.
- Determine the TCP (Tool Center Point) at the Tandem welding torch.
- Weld sample workpieces with the Tandem welding torch.

Target group

- Users who have to edit, correct and maintain the robot programs
- Robot programmers

Conditions

- Completion of the course: QR-TR-P1 Programming Basic Course
- Basic knowledge of the MIG/MAG welding technology

Seminar series
Welding processes

TIG Welding – TIG welding with the robot

This seminar is for robot programmers and users who have to edit, correct and maintain the robot programs. Learn everything about TIG welding with the robot. Find out among others how to program different workpieces, to optimise TIG parameters and to determine the TIG torch settings.

Content

- Program different workpieces
- Adjust the TIG Welding power source.
- Learn the welding basics.
- Weld with different arc types.
- Optimise the welding parameters at the robot.
- Recognise and judge the process limits.
- Optimise the robot user programs.
- Recognise welding errors.

QR-TR-TIG

Seminar period
2 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Target group

- Users who have to edit, correct and maintain the robot programs
- Robot programmers

Conditions

- Completion of the course: QR-TR-P1 Programming Basic Course

Seminar series
Welding processes

Welding Basic – Welding Training – Basic

This seminar is for MIG/MAG welders, craftspeople, welding supervisors, master craftsmen and foremen. Learn everything about manual welding. Get familiar with the welding basics, structure and function of the welding machines and the basics of the QDM software.

QN-TR-WELD

QINEO

Info

Seminar period
2 days

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

Content

- Train and deepen your theoretical and practical knowledge of welding technology.
- Explain the different (welding) processes.
- Learn the basics of the QINEO Data Manager (QDM) software.
- Learn everything about structure and function of the welding machines (series QINEO/QinTron/GL).
- Weld sample workpieces with the CLOOS welding machines by hand.

Target group

- MIG/MAG welders
- Craftspeople
- Welding supervision
- Foreman
- Supervisor

Conditions

- Basic knowledge of welding technology
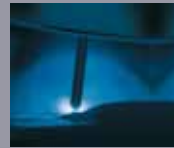- Experience in the use of welding machines

With CLOOS you weld and cut ...

... all types of metal!

... all material thicknesses from 0.5 to 300 mm!

... with innovative processes!

... just as you need it, manually or automated!

... efficiently and individually!

... with many additional services!

... in all industries!

... all over the world!

... to your utter satisfaction!

... and benefit from almost 100 years of welding experience!

... all from a single source!

Special trainings

Exclusive seminars with individual contents

Special trainings

Customer-specific individual course

Secure a thorough training in the field of robot and welding technology. Our seminars take place in small groups and under real conditions using true-to-life workpieces.
You wish to deepen your knowledge in a special topic? We would be glad to arrange an exclusive seminar with individual topics for you. Please contact us!

Content

■ On request

Target group

■ All users of the CLOOS standard seminars

Conditions

■ On request

QR-TR-SO

Seminar period
On request

Seminar times
Monday: 09:00 - 16:30
Tuesday to Thursday:
08:00 - 16:30
Friday: 08:00 – 12:00 a.m.

Participants
Small groups up to a maximum of 4 persons

All over the world!

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Subject to technical alterations.

QIROX 17/08/17

CLOOS

Weld your way.

CS 6011