

TRAINING

Robot & Welding
Training Courses
2023



In cooperation with





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Panasonic Robot & Welding Modular Training Courses

Panasonic Industry boasts a broad portfolio of solutions to meet all customer requirements – from components through to complete plant solutions for modern industry. Robot & Welding offers a variety of individual courses for training staff in production and sales to seamlessly operate the sophisticated and broadly diversified range of machinery.

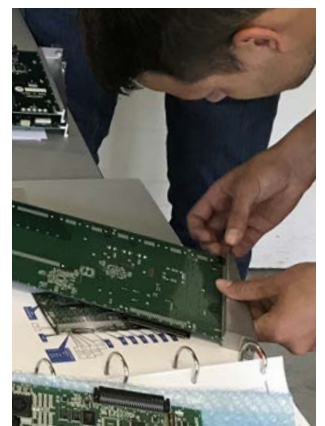
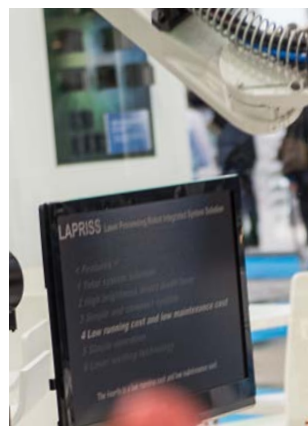
Learning from experts




Practical, effective and individual

The latest modular role-based training courses are designed for plant operators, robot programmers and system partners who are tasked with the creation, correction and maintenance of the robot programs as well as system integration and service. Thanks to the modular structure, specific training courses can be combined individually to take account of the differ-

ent training needs of operators and maintenance personnel. The Panasonic Training Centre in Neuss offers the optimum learning environment to fulfil these requirements. The goal is to empower the workforce to achieve the best possible production yields at the highest level of quality and the lowest cost.



Quick Overview

| | TRAINING | COURSE DURATION | ORDER CODE | PAGE |
|--------------------------------------|--|-------------------------------------|---------------|------|
| PROGRAMMING | Basic | 3 days | TR0250 | 7 |
| | Basic Handling | 3 days | TR025H | 7 |
| |  Robot Specialist [DVS® 1184 Module 5-6] | 5 days | TR0251 | 8 |
| | Advanced | 3 days | TR0252 | 9 |
| | External Axes | 1 day | TR0253 | 10 |
| | Touch Sensor I | 1 day | TR0254 | 11 |
| | Touch Sensor II | 1 day | TR0255 | 12 |
| | Touch Sensor III (SLS) | 2 days | TR0256 | 13 |
| | Multilayer Welding (MNU) | 2 days | TR0257 | 14 |
| | Offline Programming I (DTPS) | 3 days | TR0258 | 15 |
| | Offline Programming II (DTPS) | 3 days | TR0259 | 16 |
| SYSTEM | System Familiarisation | 1 day | TR0260 | 17 |
| INTEGRATION & MAINTENANCE | Basic Mechatronics | 4 days | TR0270 | 18 |
| | System Integration | 4 days | TR0271 | 19 |
| | Integrating Options (see overview) | 1 day each | TR0300-TR1025 | 20 |
| WELDING PROCESS | Basic MAG Welding (Level 1) | 1 day | TR0280 | 21 |
| | Basic TIG Welding (Level 1) | 1 day | TR0281 | 21 |
| | Basic MIG Welding (Level 1) | 1 day | TR0282 | 21 |
| | Advanced Welding (Level 2) | 2 days | TR0283 | 22 |
| | Arc Sensor I | 1 day | TR0284 | 23 |
| | Arc Sensor II (TFS) | 1 day | TR0285 | 24 |
| |  Cooperative Robot Specialist (according to DVS® 1184 Module 1-4) | 5 days | TR0286 | 25 |
| OPTIONS | All other training options on request | On request See optional training | TR0300-TR1032 | 6 |

Optional training

TRAINING INFORMATION: ON REQUEST

| PRODUCT NAME | PLATFORM | ORDER NO. USER TRAINING* | ORDER NO. HARDWARE INTEGRATION | HARDWARE TRAINING* | PRODUCT NO. |
|---|------------|-----------------------------|-----------------------------------|--------------------------|--------------|
| 3D/Mirror Transformation Function | Robot | TR1000 | | | YA-1UPWM1 |
| Arc Sensor Function | Robot | TR0284 | TR2001 | <input type="checkbox"/> | YA-1VPXF1 |
| Auto Backup Software | PC | TR1002 | | | YA-1NPCS1 |
| Auto Compensation of Tool | Robot | TR1003 | TR2003 | <input type="checkbox"/> | YA-1RPWE1 |
| Auto Extension / AVC | Robot | TR1004 | | | YA-1TPWX1 |
| Bead Eye NEW | PC + Robot | TR1034 | TR2034 | <input type="checkbox"/> | YA-VPXH1T01 |
| Cooperative Robot Motion (optional) | Robot | TR1005 | TR2005 | <input type="checkbox"/> | YA-1NPJF1 |
| Ext. Robot Axis Monitor Function | Robot | TR1006 | | | YA-1NPWL1 |
| External Axis Harmonious Function | Robot | TR1007 | | | YA-1UPHA1 |
| External Sensor Connection | Robot | TR1008 | TR2008 | <input type="checkbox"/> | YA-1UPSE1 |
| Feeder AMP Switching Unit | Robot | TR1009 | TR2009 | <input type="checkbox"/> | YA-1VPUC1 |
| Fixed Tool Function | Robot | TR1010 | TR2010 | <input type="checkbox"/> | YA-1UPXB1 |
| Flexible Multi-Cooperative Robot Function | Robot | TR1011 | TR2011 | <input type="checkbox"/> | YA-1UPJA1 |
| Gantry Pair Function | Robot | TR1012 | | | YA-1UPWG1 |
| iWNB NEW | PC | TR1035 | TR2035 | <input type="checkbox"/> | YY-NWBST1 |
| Laser Sensor Interface | Robot | TR1013 | TR2013 | <input type="checkbox"/> | YA-1UPSL1 |
| Parallel Sequence Function | Robot | TR1014 | | | YA-1UPXA1 |
| Production Management Function | PC | TR1015 | | | YA-1UPXD1 |
| Robot Data Access Function | Robot | TR1016 | TR2016 | <input type="checkbox"/> | YA-1UPXE1 |
| Switching of TAWERS and General Welder Function | Robot | TR1017 | | | YA-1TPWU1 |
| TAWERS VPRS NEW | PC + Robot | TR1033 | TR2033 | <input type="checkbox"/> | YA-1VPCV1 |
| TAWERS Welding Data Log | Robot | TR1018 | | | YA-1TPWY2T01 |
| Teaching Update Log | Robot | TR1019 | | | YA-1UPXC1 |
| Thick Plate Touch Sensor Software | Robot | TR1020 | | | YA-1UPST1 |
| Thick Plate Welding Function | Robot | TR1021 | | | YA-1UPM* |
| Touch Sensor Function | Robot | TR0254 | TR2022 | <input type="checkbox"/> | YA-1VPWS1 |
| Twin Harmonizer Software | Robot | TR1023 | | | YA-1UPJA1Y00 |
| Twin Robot Tandem Welding Function | Robot | TR1024 | TR2024 | <input type="checkbox"/> | YA-1UPMF1 |
| Virtual Manipulator | Robot / PC | TR1025 | TR2025 | <input type="checkbox"/> | YA-1VPCT1 |
| Weld Navigation (General Welder) | Robot | TR1026 | | | YA-1UPWQ1 |
| Weld Process Manager | Robot | TR1027 | | | YA-1UPWW1 |
| Welding Condition Editor III + SLS Editor | PC | TR1028 | | | YA-1UPCW1 |
| Welding Condition Editor Software / Thick Plate Software PC | PC | TR1029 | | | AYF01048 |
| Welding Data Log (General Welder) | Robot | TR1030 | | | YA-1UPWY2T01 |
| Welding Data Management | Robot | TR1031 | | | YA-1TPWY2 |
| Welding Data Software | PC | TR1032 | | | YA-1NPKK1 |

CARACTERISTIC OPTION

| | | | | | |
|---|-------|-------|--------|--------------------------|--------------|
| Active Wire Feed Process | Robot | TR300 | TR2300 | <input type="checkbox"/> | YA-1TPMW1 |
| Collet Tip Weld Table | Robot | TR301 | TR2301 | <input type="checkbox"/> | YA-1TPME1 |
| HD-MAG Weld Table | Robot | TR302 | | | YA-1TPMH1 |
| MIG braze software | Robot | TR319 | | | YA-1TPUW1T02 |
| Optional weld table | Robot | TR303 | | | YA-1TPUW1T17 |
| Pulse MIX NEW | Robot | TR321 | | | YA-1TPXG1 |
| Spiral Weaving | Robot | TR304 | | | YA-1UPWA1 |
| Stitch Welding Function | Robot | TR305 | | | YA-1UPWR1 |
| Super Active TAWERS HP NEW | Robot | TR320 | | | YA-1TPMV1T05 |
| TAWERS Active Aluminum | Robot | TR310 | TR2310 | <input type="checkbox"/> | YA-1TPMN1 |
| TAWERS Active Brazing | Robot | TR311 | TR2311 | <input type="checkbox"/> | YA-1TPMP1 |
| TAWERS Aluminum | Robot | TR312 | | | YA-1TPMM1 |
| TAWERS Hot Active | Robot | TR313 | TR2313 | <input type="checkbox"/> | YA-1TPMX1 |
| TAWERS Pulse Stitch Welding Function | Robot | TR314 | | | YA-1TPWR1 |
| TAWERS Super Active | Robot | TR306 | TR2306 | <input type="checkbox"/> | YA-1TPMV1 |
| TAWERS Super Active Aluminum | Robot | TR309 | TR2309 | <input type="checkbox"/> | YA-1TPMV1T03 |
| TAWERS Super Active HBC | Robot | TR307 | TR2307 | <input type="checkbox"/> | YA-1TPMV1T01 |
| TAWERS Super Active Zinc-Coated Steel (S-Zi-Tech) | Robot | TR308 | TR2308 | <input type="checkbox"/> | YA-1TPMV1T02 |
| TAWERS Synchronous Weaving Low-pulse | Robot | TR315 | | | YA-1TPMM1T01 |
| TAWERS TIG Software | Robot | TR317 | | | YA-1TPMT1 |
| TAWERS Zinc-Coated Steel (Zi-Tech) | Robot | TR316 | | | YA-1TPMZ1 |
| TIG Filler Stitch Welding Function | Robot | TR318 | TR2318 | <input type="checkbox"/> | YA-1UPWZ1 |
| TAWERS TIG Software | Robot | TR317 | | | YA-1TPMT1 |
| TIG Filler Stitch Welding Function | Robot | TR318 | | <input type="checkbox"/> | YA-1UPWZ1 |

* mostly only necessary for system partners

Basic

Online Robot Control Programming G2 / G3

| | |
|------------------------|--|
| TARGET GROUP: | Plant operators, robot programmers and system partners tasked with the creation, correction and maintenance of the robot programs as well as system integration and service. |
| TRAINING GOALS: | <p>Participants will learn how to:</p> <ul style="list-style-type: none"> › Explain the most important safety requirements and guidelines › Distinguish basic system components › Understand the program structure › Perform and adjust the TCP test › Use different coordinate systems › Move robots and create simple programs › Create linear, circular and pendular program points › Edit existing programs › Use the most important basic commands and functions › Create a welding program › Set and adjust welding parameters › Move program sections in parallel › Use teach, test and auto mode › Resolve and handle simple disruptions › Perform a system data backup |
| OPTION: | <p>Handling option for e.g. gripper (without welding function)</p> <ul style="list-style-type: none"> › Use inputs / outputs manually › Inputs / outputs via function keys › Inputs / outputs via automatic commands › Loop query commands |
| PREREQUISITE: | <p>Basic PC know-how. Technical understanding. Safety Regulations [see Page 27]</p> |

COURSE DURATION:
3 days

TRAINING TIMES:
9 am to 4:30 pm (by arrangement)

NUMBER OF PARTICIPANTS:
Min. 2 persons
per training event
(individual training on request)

CATERING:
Lunch and beverages
are included in the price

TRAINING DOCUMENTATION:
Training folder
Safety instructions
Operating manual

CERTIFICATION:
Participants will be
awarded a certificate
when they have achieved
the set training objectives
as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: TR0250

Option:
Handling Training
BOOKING CODE: TR025H

Robot Specialist

Training for the G2 / G3 Series [DVS® 1184 Module 5-6] Online Robot Control Programming G2 / G3

TARGET GROUP: Plant operators, robot programmers and system partners tasked with the creation, correction and maintenance of the robot programs as well as system integration and service.

TRAINING GOALS: Participants will learn how to:

- › Explain the most important safety requirements and guidelines
- › Distinguish basic system components
- › Understand the program structure
- › Perform and adjust the TCP test
- › Use different coordinate systems
- › Move robots and create simple programs
- › Create linear, circular and pendular program points
- › Edit existing programs
- › Use the most important basic commands and functions
- › Create a welding program
- › Set and adjust welding parameters
- › Move program sections in parallel
- › Use teach, test and auto mode
- › Resolve and handle simple disruptions
- › Perform a system data backup
- › Develop advanced basic expertise in automated welding

Test successfully with test components

PREREQUISITE: Basic PC know-how
Technical understanding

INFORMATION: This training course offers participants the possibility to qualify as a “robot welder” on completion of the optional welding operator training in accordance with ISO 14732. It is not necessary to complete the “Robot Specialist [DVS® 1184] Module 1-4” beforehand.

The sequence of modules can be determined individually by the participant. Modules 1-6 must be completed before taking the welding operator examination in accordance with ISO 14732.

Further training options are also available subsequently. For example, the “Expert in robot welding” or the “Welding operator for fully mechanised and automated welding equipment”. [\[See also page 25\]](#)

Please feel free to contact us for information on the current options.

COURSE DURATION:
5 days

TRAINING TIMES:
9 am to 4:30 pm (by arrangement)

NUMBER OF PARTICIPANTS:
Min. 2 persons
per training event
(individual training on request)

CATERING:
Lunch and beverages are included in the price

TRAINING DOCUMENTATION:
Safety instructions
Operating manual

CERTIFICATION:
Participants will be awarded a certificate when they have achieved the set training objectives as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: TR0251

Advanced Online Programming with Robot Control G2 / G3

| | |
|------------------------|--|
| TARGET GROUP: | Plant operators, robot programmers and system partners tasked with the creation, correction and maintenance of the robot programs as well as system integration and service. |
| TRAINING GOALS: | <p>Participants will learn how to:</p> <ul style="list-style-type: none"> › Perform calculations with global and local variables › Evaluate input signals, set output signals automatically and manually › Carry out programming with position variables from the variable menu › Extend available coordinate systems as well as create a user coordinate system (with walkthrough) › Optimise welding programs (cycle time / avoid delay) › Carry out programming with additional logic commands (counters, jump instructions, loop, IF THEN) › Make settings with advanced welding parameter commands with ARC-Start-CraterSLP, Wirestick release › Change the program start method › Optimise TCP › Process label sections › Perform conversion functions, incl.mirroring programs › Change the characteristic curve during the program › Create and use different tools › Perform advanced data transfer / backup function › Make advanced welding machine settings |
| PREREQUISITE: | Participants must have successfully completed the basic training course for the G2 / G3 series. Technical understanding. |

COURSE DURATION:

3 days

TRAINING TIMES:

9 am to 4:30 pm (by arrangement)

NUMBER OF PARTICIPANTS:

Min. 2 persons per training event (individual training on request)

CATERING:

Lunch and beverages are included in the price

TRAINING DOCUMENTATION:

Training folder:
Safety instructions
Operating manual

CERTIFICATION:

Participants will be awarded a certificate when they have achieved the set training objectives as proof of participation

TRAINING LOCATION: Neuss**BOOKING CODE:** TR0252

External Axes

| | |
|------------------------|--|
| TARGET GROUP: | The course is designed for plant operators who create welding programs on systems equipped with Panasonic external axes. Robot programmers. |
| TRAINING GOALS: | Participants will learn how to: <ul style="list-style-type: none"> › Distinguish which mechanism to select › Perform programming using external axes without harmonizer › Use the harmonizer function and determine necessity › Execute defined movements without a program › Perform external axis shifts › Transmit external axis data › Adapt the MDI data |
| PREREQUISITE: | Participants must have successfully completed the basic training course. |

COURSE DURATION:

1 day

TRAINING TIMES:

9 am to 4:30 pm

NUMBER OF PARTICIPANTS:

Min. 2 persons
per training event
(individual training on request)

CATERING:

Lunch and beverages
are included in the
price

TRAINING DOCUMENTATION:

Training folder
Safety instructions
Operating manual

CERTIFICATION:

Participants will be
awarded a certificate
when they have achieved
the set training objectives
as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: TR0253


Touch Sensor I

| | |
|------------------------|---|
| TARGET GROUP: | The course is designed for programmers who create welding programs using the Panasonic touch sensor. Robot programmers. |
| TRAINING GOALS: | Participants will learn how to: <ul style="list-style-type: none"> › Create programs progressively on sample parts using the touch sensor › Distinguish and program search functions › Program logic commands to control the touch sensor › Analyse and resolve faults in the welding process |
| PREREQUISITE: | Participants must have successfully completed the basic training course and demonstrate spatial awareness. |
| OPTIONAL: | Day 2 with the customer components. |

COURSE DURATION:

1 day

TRAINING TIMES:

9 am to 4:30 pm

NUMBER OF PARTICIPANTS:

Min. 2 persons per training event (individual training on request)

CATERING:

Lunch and beverages are included in the price

TRAINING DOCUMENTATION:

Training folder
Safety instructions
Operating manual

CERTIFICATION:

Participants will be awarded a certificate when they have achieved the set training objectives as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: TR0254

Touch Sensor II

| | |
|------------------------|---|
| TARGET GROUP: | The course is designed for programmers who create welding programs using the Panasonic touch sensor. Robot programmers. |
| TRAINING GOALS: | Participants will learn how to: <ul style="list-style-type: none"> › Use Transbase touch / shift functions (3D shift) › Use external axis touch / shift |
| PREREQUISITE: | Participants must have successfully completed the basic training course plus Touch Sensor I and demonstrate spatial awareness. |

COURSE DURATION:

1 day

TRAINING TIMES:

9 am to 4:30 pm

NUMBER OF PARTICIPANTS:

Min. 2 persons per training event (individual training on request)

CATERING:

Lunch and beverages are included in the price

TRAINING DOCUMENTATION:

Training folder
Safety instructions
Operating manual

CERTIFICATION:

Participants will be awarded a certificate when they have achieved the set training objectives as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: TR0255

Touch Sensor III (SLS)

| | |
|------------------------|---|
| TARGET GROUP: | The course is designed for programmers who create welding programs using the Panasonic touch sensor. Robot programmers. |
| TRAINING GOALS: | <p>Participants will learn how to:</p> <ul style="list-style-type: none"> › Use the database-based (advanced function) of the touch sensor › Manage database records › Understand the streamlined, clearly laid out program structure › Use graphical menu guidance › Use search direction programming for pipes › Use search direction programming for parallel and twisted components in fillet welds › Use search direction programming for V- and HV-welds › Handle automation of V- and HV-welds that have different starting and ending distances |
| PREREQUISITE: | <p>Participants must have successfully completed the basic training course and demonstrate very good spatial awareness.</p> <p>Touch Sensor I & II not necessary but useful.</p> |

COURSE DURATION:

2 days

TRAINING TIMES:

9 am to 4:30 pm

NUMBER OF PARTICIPANTS:

Min. 2 persons per training event (individual training on request)

CATERING:

Lunch and beverages are included in the price

TRAINING DOCUMENTATION:

Training folder
Safety instructions
Operating manual

CERTIFICATION:

Participants will be awarded a certificate when they have achieved the set training objectives as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: TR0256

Multilayer Welding (MNU)

| | |
|------------------------|---|
| TARGET GROUP: | The course is designed for experienced robot programmers who create complex welding programs using the Panasonic robot as well as technicians and engineers. |
| TRAINING GOALS: | <p>Participants will learn how to:</p> <ul style="list-style-type: none"> › Use the database-based multilayer welding function (MNU) › Manage database records › Understand the streamlined, clearly laid out program structure › Use graphical menu guidance › Perform multilayer welding (MNU) in both directions › Use pendular motions with different starting and ending distances › Program external axes with multi-rotation and multilayer welding |
| PREREQUISITE: | Participants must have successfully completed the basic training course and demonstrate very good spatial awareness. |

COURSE DURATION:

2 days

TRAINING TIMES:

9 am to 4:30 pm

NUMBER OF PARTICIPANTS:

Min. 2 persons per training event (individual training on request)

CATERING:

Lunch and beverages are included in the price

TRAINING DOCUMENTATION:

Training folder
Safety instructions
Operating manual

CERTIFICATION:

Participants will be awarded a certificate when they have achieved the set training objectives as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: TR0257

Offline Programming I (DTPS)

| | |
|------------------------|--|
| TARGET GROUP: | Robot programmers and system partners, engineers, IT specialists, technicians, technical drawers from the field of mechanical engineering. Interested parties with knowledge of CAD. |
| TRAINING GOALS: | <p>Participants will learn how to:</p> <ul style="list-style-type: none"> › Establish a network connection to the robot › Download backups via the PC (auto data receiving) › Read error / system information › Create virtual installations in DTPS › Assign a backup to a virtual installation › Import CAD components › Create standard CAD components › Position and assemble CAD components › Assign CAD components to external axes › Perform accessibility tests with DTPS-G3 › Create cycle time analyses with DTPS-G3 › Apply the teach / weld navigator function › Create work plans and copy to the robot controller |
| PREREQUISITE: | <p>Participants must have successfully completed the basic training course for the G2 / G3 series. DTPS software</p> <p>Sound PC knowledge is also an absolute requirement. Spatial awareness.</p> <p>CAD knowledge would be advantageous.</p> <p>A high-performance laptop (PC) with Windows 8 / 10 for each participant, PC mouse, mouse pad and administrator rights to install software.</p> |

COURSE DURATION:

3 days

TRAINING TIMES:

9 am to 4:30 pm

NUMBER OF PARTICIPANTS:

Min. 2 persons per training event (individual training on request)

CATERING:

Lunch and beverages are included in the price

TRAINING DOCUMENTATION:

Training folder
Safety instructions
Operating manual

CERTIFICATION:

Participants will be awarded a certificate when they have achieved the set training objectives as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: TR0258

Offline Programming II (DTPS)

| | |
|------------------------|--|
| TARGET GROUP: | Robot programmers and system partners, engineers, IT specialists, technicians, technical drawers from the field of mechanical engineering. Interested parties with knowledge of CAD. |
| TRAINING GOALS: | Participants will learn how to: <ul style="list-style-type: none"> › Calibrate systems in DTPS › Create, integrate and execute scripts › Use different transformation functions › Use the Touch Navi function |
| PREREQUISITE: | Participants must have successfully completed the basic training course for the G2 / G3 series and Offline Programming Part I. A high-performance laptop (PC) with Windows 8 / 10 for each participant, PC mouse, mouse pad and administrator rights to install software. DTPS software. |

COURSE DURATION:

3 days

TRAINING TIMES:

9 am to 4:30 pm

NUMBER OF PARTICIPANTS:

Min. 2 persons
per training event
(individual training on request)

CATERING:

Lunch and beverages
are included in the
price

TRAINING DOCUMENTATION:

Training folder
Safety instructions
Operating manual

CERTIFICATION:

Participants will be
awarded a certificate
when they have achieved
the set training objectives
as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: TR0259

System familiarisation

| | |
|------------------------|--|
| TARGET GROUP: | New system operators for refreshing knowledge. |
| TRAINING GOALS: | Participants will learn how to: <ul style="list-style-type: none">› Grasp correlations in overall system operation› Use additional system components such as HMI, torch cleaning, gates, switches, buttons, light barriers, scanners, and much more |
| PREREQUISITE: | Successful completion of the basic training course for the G2 / G3 series is recommended. |

COURSE DURATION:

1 day (on site)

TRAINING TIMES:By agreement, generally
9 am to 4:30 pm**NUMBER OF PARTICIPANTS:**

1-5 participants

CATERING: -**TRAINING DOCUMENTATION:**Use of the customer's
system documentation**CERTIFICATION:** -**TRAINING LOCATION:**

On site

BOOKING CODE: TR0260

Basic Mechatronics

| | | |
|-----------------------------|------------------------|---|
| PROGRAMMING | TARGET GROUP: | The basic course in mechatronics is designed for internal maintenance staff who perform maintenance and repair work independently on Panasonic robot welding systems. |
| SYSTEM | TRAINING GOALS: | <p>Participants will learn how to:</p> <ul style="list-style-type: none"> › Troubleshoot and resolve the most common errors and alert messages › Replace wear parts › Distinguish the most important control boards › Replace component assemblies (e.g. plug-in cards, power supplies) › Replace wire feeders › Replace motors and gears › Replace encoder batteries › Reference the manipulator and external axes following replacement of motors and gears › Reference the manipulator if “original position” is lost, without making mechanical changes › Perform maintenance inspections |
| INTEGRATION AND MAINTENANCE | PREREQUISITE: | <p>Participants must have successfully completed training in a mechanical, electronic profession.</p> <p>Willingness, interest, and the ability to apply and implement learned knowledge in practice.</p> <p>Basic knowledge of programming and operation of Panasonic robots.</p> |
| WELDING PROCESS | | |

COURSE DURATION:

4 days

TRAINING TIMES:

9 am to 4:30 pm

NUMBER OF PARTICIPANTS:

Min. 2 persons per training event (individual training on request)

CATERING:

Lunch and beverages are included in the price

TRAINING DOCUMENTATION:

Training folder
Safety instructions
Operating manual

CERTIFICATION:

Participants will be awarded a certificate when they have achieved the set training objectives as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: TR0270

System Integration

| | |
|------------------------|--|
| TARGET GROUP: | For system partners and system integrators. |
| TRAINING GOALS: | <p>Participants will learn how to:</p> <ul style="list-style-type: none"> › Commission a new robot › Integrate new hardware › Distinguish components and their function › Wire components › Activate software-related functions in the robot › Adapt the software to the system environment or according to instructions |
| PREREQUISITE: | <p>Participants must have successfully completed training in a mechanical or electronic profession.</p> <p>Willingness, interest, and the ability to apply and implement learned knowledge in practice.</p> <p>Basic knowledge of programming and operation of Panasonic robots.</p> |

| |
|---|
| COURSE DURATION: 4 days |
| TRAINING TIMES: 9 am to 4:30 pm |
| NUMBER OF PARTICIPANTS: Min. 2 persons per training event (individual training on request) |
| CATERING: Lunch and beverages are included in the price |
| TRAINING DOCUMENTATION: Training folder Safety instructions Operating manual |
| CERTIFICATION: Participants will be awarded a certificate when they have achieved the set training objectives as proof of participation |
| TRAINING LOCATION: Neuss |
| BOOKING CODE: TR0271 |

Integrating Options

| | |
|------------------------|--|
| TARGET GROUP: | For system partners and system integrators. |
| TRAINING GOALS: | <p>Participants will learn how to:</p> <ul style="list-style-type: none"> › Commission an option › Cable potential hardware › Activate software › Perform software adaptations to the system environment › Elaborate new software commands and use them |
| PREREQUISITE: | <p>Participants must have successfully completed training in a mechanical or electronic profession.</p> <p>Willingness, interest, and the ability to apply and implement learned knowledge in practice.</p> <p>Basic knowledge of programming and operation of Panasonic robots.</p> |

COURSE DURATION:

1 day

TRAINING TIMES:

9 am to 4:30 pm

NUMBER OF PARTICIPANTS:

Min. 2 persons
per training event
(individual training on request)

CATERING:

Lunch and beverages
are included in the
price

TRAINING DOCUMENTATION:

Training folder
Safety instructions
Operating manual

CERTIFICATION:

Participants will be
awarded a certificate
when they have achieved
the set training objectives
as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: On request


Basic Welding (Level 1)

- TARGET GROUP:** Plant operators, robot programmers and system partners tasked with the creation, correction and maintenance of the robot programs as well as system integration and service.
- TRAINING GOALS:** Participants will learn how to:
- › Distinguish basics in process selection
 - › Make settings for different arc types, gas mixtures and wires
 - › Modify characteristic curves for an area
 - › Handle the fundamentals of torch angles and welding speeds
- PREREQUISITE:** Basic training course for the G2 / G3 series.

| | | |
|----------|-----------------------------|----------------|
| 1 | MAG WITH PULSE BASIC | SP-MAG |
| | | SP-MAG II |
| | | MTS-C01 |
| | | Pulse |
| | | HD-Pulse |
| 2 | WIG (TIG) BASIC | TIG |
| | | TAWERS TIG |
| | | TAWERS TIG HF |
| 3 | MIG BASIC | MIG ALU WG |
| | | MIG Brazing WG |
| | | MIG SUS |
| | | AC-MIG |

COURSE DURATION:
1 day

TRAINING TIMES:
9 am to 4:30 pm

NUMBER OF PARTICIPANTS:
Min. 2 persons per training event (individual training on request)

CATERING:
Lunch and beverages are included in the price

TRAINING DOCUMENTATION:
Training folder
Safety instructions
Operating manual

CERTIFICATION:
Participants will be awarded a certificate when they have achieved the set training objectives as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE:
MAG with Pulse Basic: TR0280
WIG (TIG) Basic: TR0281
MIG Basic: TR0282

Advanced Welding (Level 2)

| | |
|------------------------|---|
| TARGET GROUP: | Welding specialists, welding engineers. |
| TRAINING GOALS: | The course is designed for optimisation. The same hardware, software, gas, material and wire is selected as in production. Problems and anomalies are clarified. Optimisation of weld parameters using suitable command options. |
| PREREQUISITE: | Participants must have successfully completed the basic training course for the G2 / G3 series and Basic Welding Part I. Completed welding training or several years' experience with welding. Willingness, interest, and the ability to apply and implement learned knowledge in practice. |

COURSE DURATION:
2 days

TRAINING TIMES:
9 am to 4:30 pm

NUMBER OF PARTICIPANTS:
Min. 2 persons
per training event
(individual training on request)

CATERING:
Lunch and beverages
are included in the
price

TRAINING DOCUMENTATION:
Training folder
Safety instructions
Operating manual

CERTIFICATION:
Participants will be
awarded a certificate
when they have achieved
the set training objectives
as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: TR0283

Arc Sensor I

Panasonic Robot Control G3 Series

| | |
|------------------------|--|
| TARGET GROUP: | The course is designed for programmers who create welding programs using the Panasonic touch sensor. Robot programmers. |
| TRAINING GOALS: | Participants will learn how to: <ul style="list-style-type: none"> › Perform parameterisation progressively on sample parts › Extend programs meaningfully using the arc sensor › Adapt parameters for optimum control of the arc sensor › Analyse and resolve faults in the welding process |
| PREREQUISITE: | Participants must have successfully completed the basic training course. |
| OPTIONAL: | A second day with the customer components. |

COURSE DURATION:

1 day

TRAINING TIMES:

9 am to 4:30 pm

NUMBER OF PARTICIPANTS:

Min. 2 persons
per training event
(individual training on
request)

CATERING:

Lunch and beverages
are included in the
price

TRAINING DOCUMENTATION:

Training folder
Safety instructions
Operating manual

CERTIFICATION:

Participants will be
awarded a certificate
when they have achieved
the set training objectives
as proof of participation

TRAINING LOCATION: Neuss**BOOKING CODE:** TR0284

Arc Sensor II (TFS) Panasonic Robot Control G3 Series

TARGET GROUP: The course is designed for programmers who want to create complex welding programs using the Panasonic multilayer welding (MNU) option and integrate the arc sensor. Experienced robot programmers, technicians and engineers.

TRAINING GOALS: Participants will learn how to:

- › Use the database-based function of the arc sensor
- › Manage database records
- › Understand the streamlined, clearly laid out program structure
- › Use graphical menu guidance
- › Export the TBF data for external evaluation
- › Combine the database functions MNU & SLS
- › Find optimum parameters

PREREQUISITE: Participants must have successfully completed the basic training course and demonstrate very good spatial awareness.
Arc sensor I not necessary but useful.

COURSE DURATION:

1 day

TRAINING TIMES:

9 am to 4:30 pm

NUMBER OF PARTICIPANTS:

Min. 2 persons per training event (individual training on request)

CATERING:

Lunch and beverages are included in the price

TRAINING DOCUMENTATION:

Training folder
Safety instructions
Operating manual

CERTIFICATION:

Participants will be awarded a certificate when they have achieved the set training objectives as proof of participation

TRAINING LOCATION: Neuss

BOOKING CODE: TR0285

Cooperative Robot Specialist (in accordance with DVS® 1184 Module 1-4)

| | |
|------------------------|--|
| TARGET GROUP: | Plant operators Welding specialists Welding engineers Experts in robot production |
| TRAINING GOALS: | MODULE 1-4 "Welding technology" Access the "Welding technology" module directly at SLV Duisburg or following successful completion of the basic training [Module 5-6]. Attention focuses here primarily on the special aspect of automated welding in practice. Learn how to weld your component based on predefined welding instructions (WPS) and discover the positive factors that influence a good welding result with high process stability (incl. final examination). |
| PREREQUISITE: | It is not necessary to have previously completed the "Roboter Specialist Training for the G2 / G3 Series [DVS® 1184] Module 1". The sequence of modules can be determined individually by the participant. Only modules 1 & 2 must be completed before taking the welding operator examination in module 3. |
| INFORMATION: | This training course offers participants the possibility to qualify as a "robot welder" on completion of the optional welding operator training in accordance with ISO 14732. Further training options are also available subsequently. For example, the "Expert in robot welding" or the "Welding operator for fully mechanised and automated welding equipment". Please feel free to contact us for information on the current options. |



COURSE DURATION:
5 days

TRAINING TIMES:
On request

NUMBER OF PARTICIPANTS:
Min. 2 persons
per training event
(individual training on request)

CATERING:
Lunch and beverages
are included in the
price

TRAINING DOCUMENTATION:
Training folder
Safety instructions
Operating manual

CERTIFICATION:
Participants will be
awarded a certificate
when they have achieved
the set training objectives
as proof of participation

TRAINING LOCATION:
SLV Duisburg

BOOKING CODE: TR0286



APPLICATION

Applications must be submitted in writing.
Please send your application to:

Panasonic Connect Europe GmbH

Robot & Welding
After Sales Service
Jagenbergstr. 11a
D41468 Neuss, Germany
Offer e-mail: pwse.training@eu.panasonic.com

DATES

The training dates are assigned individually. Please get in touch with us in good time so that we can consider your preferred dates. Reservations can only be processed following submission of a written order. Panasonic reserves the right to postpone the training offered due to special reasons and in consultation with you.

We would like to point out that three people at most may participate in training with robots. This is necessary to ensure effective and high-quality training, since it allows us to address the specific needs of the participants and offer sufficient opportunities to take part in exercises. Should you nonetheless require individual changes, please note that additional costs will be incurred as a result.



PREREQUISITES

Please check the prior knowledge required to participate in the respective training course. We will be pleased to advise you. Should it transpire during the training course that a participant does not have the required prior knowledge, it may not be possible to make allowance for this participant during the further course of the training.

TIMES

Our normal training times are Monday through Friday, from 9 am to 4:30 pm and include a lunch break of one hour. Changes are possible by agreement. Beverages and lunch are included during the training period.



TRAINING DOCUMENTATION

All required manuals/operating instructions and installation instructions will be made available for the training and then retained by the participant.

CERTIFICATE OF PARTICIPATION

A certificate will be issued upon successful completion of the training to confirm participation.

ACCOMMODATION

We would be pleased to assist you with your hotel reservation. Two hotels are listed below, which are located in the vicinity of the training centre. Both hotels offer a special Panasonic rate.

Mercure Hotel Düsseldorf Neuss

(2 km away, our recommendation)

Am Derikumer Hof 1
D-41469 Neuss, Germany
+49 (0) 2131 138 424

E-mail:

martina.feuerstake@gchhotelgroup.com

www.hotel-duesseldorf-neuss.com

Covid related

second hotel currently closed

CANCELLATION

Once your application has been confirmed by **Panasonic Connect-GmbH**, cancellations can only be made in writing. A processing charge of 10% of the training fee shall apply in case of cancellations up to seven calendar days prior to the commencement of training. If notice of cancellation is received less than 7 calendar days prior to the start of the event, or if participants fail to attend, 50% of the training fee shall be payable. Alternatively a substitute participant may be nominated.

SAFETY REGULATIONS

Please familiarise yourself with the following information prior to taking up activities:

- Emergency exits
- First-aid equipment
- Fire extinguishers

1. Accident prevention regulations: Accident prevention is a top priority in our company and we therefore demand maximum safety at every workplace. Please review the applicable health and safety regulations carefully before completing any work for us or taking part in training. Failure to observe these statutory regulations may result in injury not only to you but also to our employees. We therefore expect you to comply with the applicable regulations.

2. Environmental protection and hazardous substances: You have to comply with the statutory requirements in relation to emission and water protection as well as the requirements under chemicals legislation. Water-polluting substances must not be allowed to escape into the sewer system or the soil under any circumstances. Containers must be provided for collecting and/or storing these substances. You shall be held personally culpable and liable in case of infringements. You must, on request, present proof of attendance at the relevant training courses required for handling hazardous substances.

3. Workplace: Only access the workplace area provided for the purpose of your work at Panasonic. Access to other company departments is only permitted to the extent required to complete your work. The workplace must be left clean and tidy.

4. Ban on smoking: Smoking is only permitted in the designated areas outside the building. Place cigarette butts and ashes in the designated ashtrays only.

5. Personal protective equipment: The training participants are obliged to wear safety shoes. In addition, appropriate personal protective equipment must also be worn to protect against hazards.

6. Crane systems and industrial trucks: Unauthorised use of our lifting gear and industrial trucks is prohibited. Should such usage be required for assembly purposes, this must be agreed with us by the service manager. Your employees must have attended the relevant training courses or have the required certification to use our industrial trucks.

7. Our plant property: Use of plant equipment, machinery, facilities and materials shall be at your own risk and is only permitted with the approval and knowledge of the responsible department on whose behalf you are working. You must be able to demonstrate the necessary qualifications to use our work equipment.

8. Your tools: The tools, machinery, equipment, etc. that you use must comply with BetrSichV (German Health and Safety at Work Regulations) and be approved under German Social Accident Insurance (DGUV). Please lock everything away in the evening and during breaks. We shall not compensate for any loss.

9. Open flame: Any work that requires use of open flames is only permitted following our prior consent. We decide whether fire protection personnel should be appointed. All work involving heat must be sanctioned by the service manager.

10. Scaffolding and ladders: Only scaffolding and ladders that comply with the requirements of the employers' liability insurance association may be used. Make sure, in particular, that only scaffolding material that is in perfect condition is used. Mobile scaffolding may only be moved if no persons are present on it, while assembly scaffolding in factory buildings and above doors and gates must be secured to ensure that employees are not injured by falling objects. Dismantled scaffolding must be removed immediately.

11. Waste: It is prohibited to bring waste into Panasonic. We have containers stationed in all areas where you can separate and dispose of your waste. Our staff will assist you with separation.

12. Electrical tools and machinery: A voltage of 230 V is available for using electric power tools and machinery and 400 V for three-phase current. All connections must be VDE-compliant in design. Interventions in existing switchgear and distribution equipment is not permitted.

13. Live installations: Always switch off the voltage supply or ensure contact protection when working near open, unprotected, live installations. The disconnection of the voltage during assembly must be reported as early as possible to the service manager so that downtimes can be avoided in other areas.

14. Accidents: Should you or one of your employees have an accident, our first-aiders are available to assist you. You are however obliged in general to provide properly trained staff and first-aid material. The regulations applicable to your particular company in relation to reporting accidents shall remain unaffected. Report every accident, emergency or case of damage as follows:

Where did the emergency/incident occur?

What happened?

How many people are injured?

Who is calling?

15. Non-disclosure agreement: There may be products in our company that are provided by the customer, which are subject to confidentiality. You are obliged when working in our company not to pass on to third parties any relevant, accessible and visible products and information. Moreover, a general ban on photography applies throughout the entire company premises and buildings, including mobile phones with photographic capability. Panasonic reserves the right to take legal action in case of infringements.

16. Safeguard clause: You are to ensure that all occupational health and safety and environmental protection regulations are observed when performing the duties assigned to you. You are obliged to instruct the employees deployed comprehensively as to the content of the data sheet to hand. You shall indemnify us from all claims by third parties that may be asserted against us arising from damages caused in connection with the work performed and that are not attributable to us (indemnity obligation). You must take out adequate liability insurance to cover claims arising from cases of damages and provide us with evidence thereof. The instructions of Panasonic employees must be followed.

LIABILITY

Panasonic Connect Europe GmbH is not liable for damages resulting from accidents in our plant or as a result of loss of belongings. Storage media that participants bring in with them must not be used. The participant can be held fully liable for damages arising from the use of own storage media.



Panasonic Connect Europe GmbH
Robot & Welding
After Sales Service
Jagenbergstraße 11a
D-41468 Neuss, Germany

Panasonic
CONNECT