Headland Training Courses
Having well trained staff pays off. Qualified personnel can utilise the full potential of both the machine and the programming systems, giving you a direct advantage over the competition. We place a strong focus on comprehensive training in machine and programming systems for your workforce, keeping you ahead of the game.

Benefits
- Wide range of courses for beginners to experts
- Experienced trainers
- Modern training facilities
- Large amount of practical exercises

For any questions or bookings
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MACHINE TRAINING
Sheet Metal Processing

TruLaser Operator Training: 3 days

Prerequisites

• Technically-oriented vocational training

Subjects

Operation topics:

• Machine discussion
• Structure and machine components
• Structure and adjustment of laser cutting head or cutting unit
• Training the user interface, operating elements and operating sequences with exercises
• Presentation of the diagnostics system
• Program management
• Machine options

Maintenance topics:

• Studying system components
• Detailed safety instructions
• Beam guidance
• Setting jobs and handling of cutting head and/or unit
• Diagnostics with the control
• Structure of the dust extraction system
• Explaining maintenance procedures for the machine and laser unit
• Machine options
• Pneumatic, gas, hydraulic, cooling water, lubrication diagrams and schematics

Objectives

You will be able to reliably handle the machine’s operating elements and to prepare, initiate and influence the production process. You will be able to maintain the machine according to the given intervals.

Relevant machines

TruLaser Series 1000, 2000, 3000, 5000, 7000 and 8000.
TruPunch Operator Training: 3 days

Prerequisites
- Technical understanding or technically-oriented vocational training (or: experience with TRUMPF punching tools)

Subjects

**Operation topics:**
- Machine design
- Technical information punching, nibbling and forming
- Tooling design
- Tool types and tool maintenance
- Tool selection criteria
- Active die
- Presentation of machine
- Structure and components of machine
- Adjust and load tools
- Training the user interface, operational elements and processes along with exercises
- Presentation of the diagnostics system and online help
- Program management
- Machine options

**Maintenance topics:**
- Machine structure
- Technical data
- Punching head structure
- Die adapter
- Exhaust system
- Principle of tool changer
- Drive system
- Hydraulics, pneumatics and electrics
- Tool lubrication
- Adjustment jobs
- Maintaining the machine according to intervals
- Diagnostics systems

Objectives
You will be able to handle the machine’s operating elements and to prepare, initiate and influence the production process. You will be able to maintain the machine according to the given maintenance intervals.

Relevant machines
TruPunch 1000, 2020, 3000 and 5000.
TruMatic Operator Training: 3 days

Prerequisites
- Technical understanding or technically-oriented vocational training (or: experience with TRUMPF punching tools)

Subjects

Operation topics:
- Machine design
- Technical information punching, nibbling and forming
- Tooling design
- Tool types and tool maintenance
- Tool selection criteria
- Active die
- Presentation of machine
- Structure and components of machine
- Adjust and load tools
- Adjustment and handling of laser cutting head
- Training the user interface, operational elements and processes along with exercises
- Presentation of the diagnostics system and online help
- Program management
- Machine options

Maintenance topics:
- Machine structure
- Technical data
- Cutting head, laser presser foot, laser sub-unit
- Laser beam guidance, chiller, exhaust system
- Hydraulic punching head with electro-hydraulic linear amplifier
- Die adapter with die base and exhaust system
- Pneumatic and hydraulic plans and schematics
- Tool lubrication
- Overview of controls used
- Cleaning, care and lubrication of machine according to maintenance overview (check list)

Objectives
You will be able to operate the machine’s operating elements and to prepare, initiate and influence the production process. You will be able to maintain the machine according to the given maintenance intervals.

Relevant machines
TruMatic 3000, 6000 and 7000.
MACHINE TRAINING
Sheet Metal Processing

TruBend Operator Training: 2 days

Prerequisites

- PC knowledge
- Technical understanding or experience in handling the material sheet
- Experience in handling a press brake

Subjects

Operation topics:

- Machine design
- Machine options
- Technical data
- Bending methods
- Tool overview and system
- Calculations and criteria for selecting tools
- User interface T 3000 / TASC 6000 control and operational elements and sequences
- Safety instructions
- Functional units (axis system, press beam cycle etc.)
- Numeric and graphical program creation
- Program optimization and handling
- Processing various programs
- Processing various programs by the ACB angle sensor system and/or bending aid

Maintenance topics (for TruBend Series 5000 only):

- Machine structure
- Technical data
- Functional units
- Backgauge system
- Tool clamping
- Machine control
- PCSS press safety control

Objectives

You will be able to operate, program and set up the TruBend Series 3000, 5000 and 7000 and guarantee part quality. You will be able to maintain your TruBend 5000 according to the given intervals as well as to localize malfunctions and clear simple errors.

Relevant machines

TruBend Series 3000, 5000 and 7000.
TruBend Cell Operator Training: 3 days

Prerequisites
- PC knowledge
- Technical understanding or experience in handling the material sheet
- Experience in handling a press brake

Objects
You will acquire basic knowledge and skills to operate the TruBend Cell 7000.

Relevant machines
TruBend Cell 7000.
TruLaser Tube Operator Training: 4 days

Prerequisites
- Technically-oriented vocational training

Subjects
Operation topics:
- Machine discussion
- Structure and components of machine
- Structure and adjustment of laser cutting head
- Training the user interface, operating elements and operating sequences with exercises
- Presentation of the diagnostics system and online help
- Program management
- Important NC programming functions
- Machine options

Maintenance topics:
- Getting familiar with the components of the system
- Detailed safety instructions
- External beam path
- Adjustment jobs and handling the cutting head
- Design of the control PLCX/MMC/NCK
- Diagnostic possibilities with the control
- Installation of the dust extractor
- Explanation of maintenance works for machine and laser unit
- Options of the machine
- Pneumatic, gas, lubrication and circuit diagrams

Objectives
You will be able to handle the machine’s operating elements and to prepare, initiate and influence the production process. You will be able to maintain the machine according to the given maintenance intervals.

Relevant machines
TruLaser Tube 5000 and 7000.

TRUMPF Customer Specific Operator Training: tbd

Prerequisites
- None

Subjects
Customer specific courses are available on request. The content will be customized to your TRUMPF machine and needs.
Basic Robot Programming / Operator Training: 4 days

Prerequisites
- None

Subjects
- Safety instruction for KUKA robots
- Operation of the robot system
- Knowledge and use of the coordinate systems
- Methods of tool calibration and tool payload
- Realising a mastering
- Realising a calibration of a work piece
- Use of the navigator, creating programs and archiving of programs
- Use of motion programming
- Insert, delete and manipulate points
- Limited position correction
- Use of logic and gripper programming
- Introduction to the expert level
- Work with automatic mode

Objectives
You will obtain basic knowledge and skills to program and operate your KUKA robot.

ARC Welding With ArcTechDigital: 4 days

Prerequisites
- Participation in the “Basic Robot Programming” course

Subjects
- Safety
- Operation and programming of additional axis and kinematics
- Technology instructions of the software package ArcTechDigital (A20)
- Programming ARC welding seams
- Operation of the power source (Fronius TPS 4000)
- Basics of the ARC welding technology
- Detection and prevention of faulty seams

Objectives
You will be able to operate a robot and an ARC welding system properly and safety-consciously, to jog and program external axis’ and create application programs with ARC welding applications.
MACHINE TRAINING
Robotics

KUKA Customer Specific Operator Training: tbd

Prerequisites

• None

Subjects

Customer specific courses are available on request. The content will be customized to your robot and needs and usually contains the following:

• Safety instructions
• Operation of the robot system
• Open training based on customer questions and needs

Objectives

You will be able to operate your robot according to your needs.
MACHINE TRAINING
CNC Machine Tools

Operator Training: tbd

Prerequisites
• None

Subjects
This on-site training course is customized to your CNC machine and needs. The content varies but usually covers the following topics:

• Safety instructions
• Structure and components of CNC machines
• CNC machine operation - customer specific
• Maintenance

Objectives
You will be able to handle the machine’s operating elements and to prepare, initiate and influence the production process. You will be able to maintain the machine according to the given maintenance intervals.

Advanced Operator / Application Training: tbd

Prerequisites
• Experience in handling CNC Machine Tools

Subjects
This on-site training course is customized to your CNC machine and needs. The content varies but usually covers the following topics:

• Improving and optimising the manufacturing process
• Utilizing resources to their highest capacity
• Finding potential areas to profit from

Objectives
You will acquire in-depth knowledge on the application possibilities of the production procedures of your machine according to your needs.

Maintenance Training: tbd

Prerequisites
• Experience in handling CNC Machine Tools

Subjects
This on-site training course is customized to your CNC machine. The content usually covers the following topics:

• Machine structure and components
• Technical data
• Tool lubrication
• Overview of controls
• Cleaning, care and lubrication of machine according to maintenance overview (check list)

Objectives
You will be able to maintain the machine according to the given maintenance intervals.
SOFTWARE TRAINING
TruTops Laser

Drawing And Nesting: 2 days

Prerequisites

- PC knowledge
- This training course is not required in case of prior knowledge of TruTops Punch Drawing and Nesting

Subjects

- Modular software structure
- Introduction to operating systems
- Drawing of workpiece geometries
- Reading in and preparing DXF drawings
- Creating mini-nests (MiniNest)
- Manual and job-related nesting of parts geometries on sheets

Objectives

You will be able to draw part geometries, import external-format drawings in TruTops and to create a sheet layout. This training course provides the basic knowledge required for the participation in the:

- TruTops Laser Technology and
- TruTops Punch Technology course.

Relevant machines

TruLaser Series 1000, 2000, 3000, 5000, 7000 and 8000.

Technology: 3 days

Prerequisites

- Participation in the Drawing and Nesting course (or: comprehensive experience in operating the respective machine)

Subjects

- Programming laser processes (single part, blank, sheet metal and slitting cut)
- Optimising processing
- Creating NC programs
- Maintenance and adaptation of the data base

Objectives

You will be able to determine processing strategies and create practical programs. In the case of automation components a participation in a TruTops Laser Automation course is required.

Relevant machines

TruLaser Series 1000, 2000, 3000, 5000, 7000 and 8000.
SOFTWARE TRAINING
TruTops Laser

Advanced Programming: 2 days

Prerequisites
- Participation in the training course *TruTops Laser Technology*
- TruTops Laser programming experience

Subjects
- Adopt external data
- Cutting up scrap
- Preparation of geometries
- Use of fixtures
- Form GMT (geometry with technology) and nesting
- Create and use customer cycles
- Manipulate NC texts
- Create technology tables and rules
- Your questions - customized content

Objectives
You will be able to use TruTops functions more efficiently to increase process reliability on the machine as well as to reduce part cycle times.

Relevant machines
TruLaser Series 1000, 2000, 3000, 5000, 7000 and 8000.

Automation: 1 day

Prerequisites
- Participation in the training course *TruTops Laser Technology*

Subjects
- Machine components and technical data of automation components
- Loading and unloading strategies
- Program automation components
- Interpretation of NC programs

Objectives
You will be able to program automation sequences.

Relevant machines
TruLaser Series 3000, 5000, 7000 and 8000 with SortMaster, LiftMaster sort, LiftMaster Compact and LiftMaster Store.
SOFTWARE TRAINING
TruTops Punch

Drawing And Nesting: 2 days

Prerequisites
- PC knowledge
- This training course is not required in case of prior knowledge of TruTops Laser Drawing and Nesting

Subjects
- Modular software structure
- Introduction to operating systems
- Drawing of workpiece geometries

Objectives
You will be able to draw part geometries, import external-format drawings in TruTops and to create a sheet layout. This training course provides the basic knowledge required for the participation in the TruTops Punch Technology course.

Relevant machines
TruPunch 1000, 2020, 3000 and 5000.

Technology: 3 days

Prerequisites
- Participation in a Drawing and Nesting course (or: comprehensive experience in operating the respective machine)

Subjects
- System adaptation for your machine
- Working with the TruTops data base
- Different ways to the production goal
- Programming punching, nibbling and forming processes
- Sheet layout strategies
- Blank processing
- Repositioning
- Process optimisation
- Creating NC programs
- Machine options

Objectives
You will be able to determine processes strategies and create practical NC programs. In case of automation components a participation in the TruTops Punch Automation training course is required.

Relevant machines
TruPunch 1000, 2020, 3000 and 5000.
SOFTWARE TRAINING
TruTops Punch

Advanced Programming: 2 days

Prerequisites
- Participation in the training course *TruTops Punch Technology*
- TruTops Punch programming experience

Subjects
- Loading other data formats
- Preparation of geometries
- Tool data import
- Contour mode
- Programming project
- Auto-run
- Production plan
- Rules for removal
- Forming tools
- Processing samples
- Manipulate NC texts and tables
- Your questions - customized content

Objectives
You will be able to use TruTops functions more efficiently to increase process reliability on the machine as well as to reduce part cycle times.

Relevant machines
TruPunch 1000, 2020, 3000 and 5000.

Automation: 1 day

Prerequisites
- Participation in the training course *TruTops Punch Technology*

Subjects
- Machine components and technical data of automation components
- System adaptation
- Loading and unloading strategies
- Program automation components
- Creating case-oriented NC programs

Objectives
You will be able to program automation sequences.

Relevant machines
TruPunch 3000 and 5000 with SheetMaster, PalletMaster, PalletMaster Box, GripMaster or ShearMaster.
SOFTWARE TRAINING
TruTops Punch (Combination Machines)

Drawing And Nesting: 2 days

Prerequisites
- PC knowledge
- This training course is not required in case of prior knowledge of TruTops Laser Drawing and Nesting

Subjects
- Modular structure of software
- Introduction in operating the system
- Drawing workpiece geometries
- Reading in and preparing DXF, IGES and MI drawings
- Creating mini-nests (MiniNest)
- Job-related nesting of parts geometries on sheets

Objectives
You will be able to draw part geometries, import external-format drawings in TruTops and to create a sheet layout. This training course provides the basic knowledge required for the participation in the:
- TruTops Laser Technology and
- TruTops Punch Technology course.

Relevant machines
TruMatic 3000, 6000 and 7000.

Technology: 4 days

Prerequisites
- Participation in the Drawing and Nesting course (or: comprehensive experience in operating the respective machine)

Subjects
- System adaptation for your machine
- Working with the TruTops data base
- Different ways to the production goal
- Programming punching, nibbling, laser and forming processing processes
- Sheet layout strategies
- Blank processing
- Repositioning
- Optimize processing
- Creating NC programs
- Machine options

Objectives
You will be able to determine processing strategies and create practical NC programs. In case of automation components a participation in the TruTops Punch Automation course is required.

Relevant machines
TruMatic 3000, 6000 and 7000.
SOFTWARE TRAINING
TruTops Punch (Combination Machines)

Advanced Programming: 2 days

Prerequisites
- Participation in the training course TruTops Punch Technology
- TruTops Punch programming experience

Subjects
- Loading other data formats
- Preparation of geometries
- Tool data import
- Contour mode
- Programming project
- Auto-run

- Production plan
- Rules for removal
- Forming tools
- Processing samples
- Manipulate NC texts and tables
- Your questions - customized content

Objectives
You will be able to use TruTops functions more efficiently to increase process reliability on the machine as well as to reduce part cycle times.

Relevant machines
TruMatic 3000, 6000 and 7000.

Automation: 1 day

Prerequisites
- Participation in the training course TruTops Punch Technology

Subjects
- Machine components and technical data of automation components
- System adaptation
- Loading and unloading strategies
- Program automation components
- Create case-oriented NC programs

Objectives
You will be able to program automation sequences.

Relevant machines
TruMatic 3000, 6000 and 7000 with SheetMaster, PalletMaster, PalletMaster Box, GripMaster or ShearMaster.
SOFTWARE TRAINING
TruTops Bend

Drawing: 1 day

Prerequisites
- PC knowledge
- This training course is not required for those with TruTops Drawing and Nesting knowledge

Subjects
- Modular software structure
- Introduction to how to operate the system
- Drawing of workpiece geometries
- Reading in and preparing DXF, IGES and MI drawings

Objectives
You will be able to draw part geometries and import external-format drawings in TruTops.

Relevant machines
TruBend Series 3000, 5000, 7000, 8000 and TruBend Cell 7000.

Technology: 3 days

Prerequisites
- Participation in the Drawing course (or: comprehensive experience in operating the respective machine)
- For TruBend Series 8000: Participation in the Operator Course TruBend Series 8000

Subjects
- Operating the system
- Maintenance and optimisation of data base
  (shortening values, material management, tool data, machine data)
- Creation of simple profiles by the profile editor and their unfolding
- Adaptation of unfolding processes to correct shortening values
- Input of bending lines with necessary bending data and bending sequence
- Creating an allocation plan (checking and modification of determined tool set-ups)
- Simulation of the bending sequence
- Generating NC programs

Objectives
You will be able to enter the necessary bending data, select appropriate processing strategies and generate practical NC programs.

Relevant machines
TruBend Series 3000, 5000, 7000, 8000 and TruBend Cell 7000.
SOFTWARE TRAINING
TruTops Bend

Automation: 3 days

Prerequisites
- Participation in the training course TruTops Bend Technology

Subjects
- Sub-assemblies and technical data of automation components
- Framework conditions
- Principle of course of part manufacturing with automation
- Basics system adaptation in TruTops Bend
- Program creation with automation TruTops Bend
- Motion, reset and modification possibilities
- Loading and unloading strategies

Objectives
You will be able to program BendMaster sequences.

Relevant machines
TruBend Series 5000 and 7000 with BendMaster and TruBend Cell 5000 and 7000.
SOFTWARE TRAINING
TruTops Tube (Laser And RotoLas Machines)

Design Basic: 1 day

Prerequisites
- PC knowledge
- This training course is not required for those with prior knowledge of Tube CAD / Design

Subjects
- Modular structure of software
- Introduction to how to operate the machine
- Introduction into 3D design

Objectives
You will be able to understand 3D design concepts.

Relevant machines
TruLaser Tube 5000, 7000 and RotoLas option on TruLaser machines.

CAD / Design: 3 days

Prerequisites
- 3D modeling knowledge

Subjects
- Modular structure of software
- Introduction to how to operate the machine
- Drawing of workpiece geometries
- Reading in and preparing DXF drawings
- Tube programming
- Creating 3D tube models
- Reading in and editing external drawings
- Export tube designs in TruTops Tube

Objectives
You will be able to draw part geometries, import other drawings in TruTops, draw individual tubes, design complex 3D tube models, and develop tubes for further processing in TruTops Tube.

Relevant machines
TruLaser Tube 5000, 7000 and RotoLas option on TruLaser machines.
SOFTWARE TRAINING
TruTops Tube (Laser And RotoLas Machines)

Technology: 3 days

Prerequisites
- PC knowledge
- Participation in a Drawing course and
- Participation in a basic training course to program your machine (or: comprehensive experience in operating the respective machine)

Subjects
- Programming of round and/or rectangular tubes and free profiles
- Draw developed contours or develop them as DXF on the tube
- Programming laser processing processes
- Optimising the processing process
- Creating NC programs
- Tube layout with identical and differing parts
- Creating production plans and service programs

Objectives
You will acquire the knowledge you need to program your machine. You will be able to draw workpieces, select suitable processing strategies and create successful NC programs.

Relevant machines
TruLaster Tube 5000, 7000 and RotoLas option on TruLaser machines.
SOFTWARE TRAINING
Supplementary TruTops Software Courses

TruTops Calculate: 1 day

Target Group
Users in charge of preliminary cost calculation of sheet metal parts.

Prerequisites
- Basic PC knowledge

Subjects
- Software customization and data management
- Preparing cost calculations for individual workpieces and sub-assemblies
- Vectorization of graphics files (option)

Objectives
You will acquire the knowledge required to prepare cost calculations based on your individual cost situation.

TruTops products required
TruTops Laser or Punch.

TruTops Unfold: 1 day

Prerequisites
- PC knowledge
- Basics of unfolding technique

Subjects
- Loading and unfolding components
- Single parts
- Volume models
- Surface models
- Data bank adaptation
- Populate materials and tools in the TruTops Unfold database

Objectives
You will be able to unfold 3D models available in the common exchange formats. You create a 2D drawing in the GEO or DXF format.
SOFTWARE TRAINING
Robotics

Advanced Robot Programming: 4 days

Prerequisites
- Participation in the Basic Robot Programming course

Subjects
- Programming methodology
- Use of the navigator at expert level
- Use of variables & declarations
- Programming of sub-programs and functions
- Use of data lists
- Knowledge of data manipulation
- Programming of motions in KRL
- Use of system variables
- Use of control structures (jumps, branches & loops)
- Configuration of the automatic external interface
- Knowledge of the submit interpreter

Objectives
You will acquire further programming knowledge, learn more about the KUKA programming language KRL and use it in structured programs based on the reached basic acquirements.

Retain Robot Programming: 2 days

Target Group
Experienced programmers of other robots.

Prerequisites
- Programming experience
- Sound knowledge of setup and programming

Subjects
- Safety instructions
- Operation of the robot system
- Knowledge of the coordinate systems
- Selection and jogging with a suitable coordinate system
- Overview setup (mastering, tools & work pieces)
- Realise a mastering
- Use of the “Expert” navigator & archiving of programs
- Basics of motion programming
- Logic programming
- Use of data lists
- Use of control structures (jumps, branches & loops)
- Work with automatic mode

Objectives
You will become familiar with KUKA industrial robots.
SOFTWARE TRAINING
Robotics

Expert Robot Programming: 4 days

Prerequisites
- Participation in the Basic Robot Programming course
- Participation in the Advanced Robot Programming course

Subjects
- Robot programming as project work
- Robot anti-collision (programming of interlocks with robots)
- Programming of messages
- Programming of interrupts
- Programming of path related switches (trigger)
- Function of automatic fault handling
- Programming of a automatic return motion strategy
- Working with inputs & outputs (digital, analog)

Objectives
You will know how to program robot specific applications based on the first knowledge of the KUKA programming language.