

Services

Training & Certification

Greater Knowledge for Greater Success!



WE CREATE SMART FACTORIES

Editorial

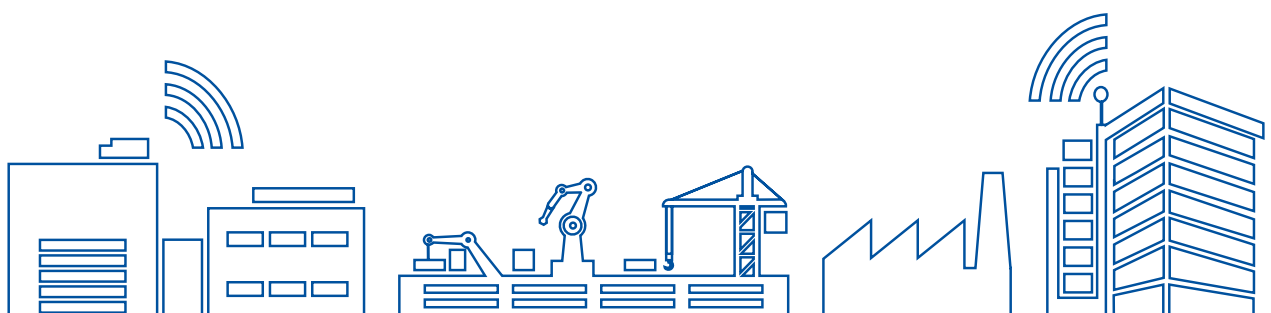
„Greater Knowledge for Greater Success“

Your investment in the future has really only paid off once you make optimum use of all the opportunities offered by your Manufacturing Execution System (MES). That is why we support you with a comprehensive training offer for your MES and have compiled all HYDRA 8 training courses along with the corresponding certifications in this catalog. Simply select the training courses that fit your applications and gain in-depth practical knowledge. MPDV provides certifications to prove your knowledge. Just join our Certification Days to demonstrate your skills and become officially certified.

If you need assistance finding the right training and certification, we are happy to help and advise you.

We are looking forward to meeting you at one of our training courses and to present you with your HYDRA 8 certificate soon!

Your MPDV Training & Certification Team



Contact and training centers



Taking off together on a smart footing

Let's take off together with HYDRA X and FEDRA 2: Plan your training today and compile your personal training plan. We will reserve the training places for you and advise you:

- advising on the right training for you and your team
- selecting the training and put it into the right order
- preparing individual training units for your company

You might also have questions about content or need help with booking training in the webshop?

We are here for you! Contact us at trainings@mpdv.com



Our training centers: Contact details

MPDV Mikrolab GmbH

Headquarters

Römerring 1
74821 Mosbach, Germany
Phone +49 6261 9209-0
trainings@mpdv.com

Subsidiary Hamm

An der Bewer 4a
59069 Hamm, Germany
Phone +49 2385 92124-0
trainings@mpdv.com

Subsidiary Munich

Karl-Hammerschmidt-Str. 32
85609 Aschheim, Germany
Phone +49 89 909996-0
trainings@mpdv.com

MPDV USA, Inc. Chicago

10720, W. 143rd Street
Suite 20
Orland Park, IL 60462, USA
Phone +1 708 966.4290
trainings.usa@mpdv.com

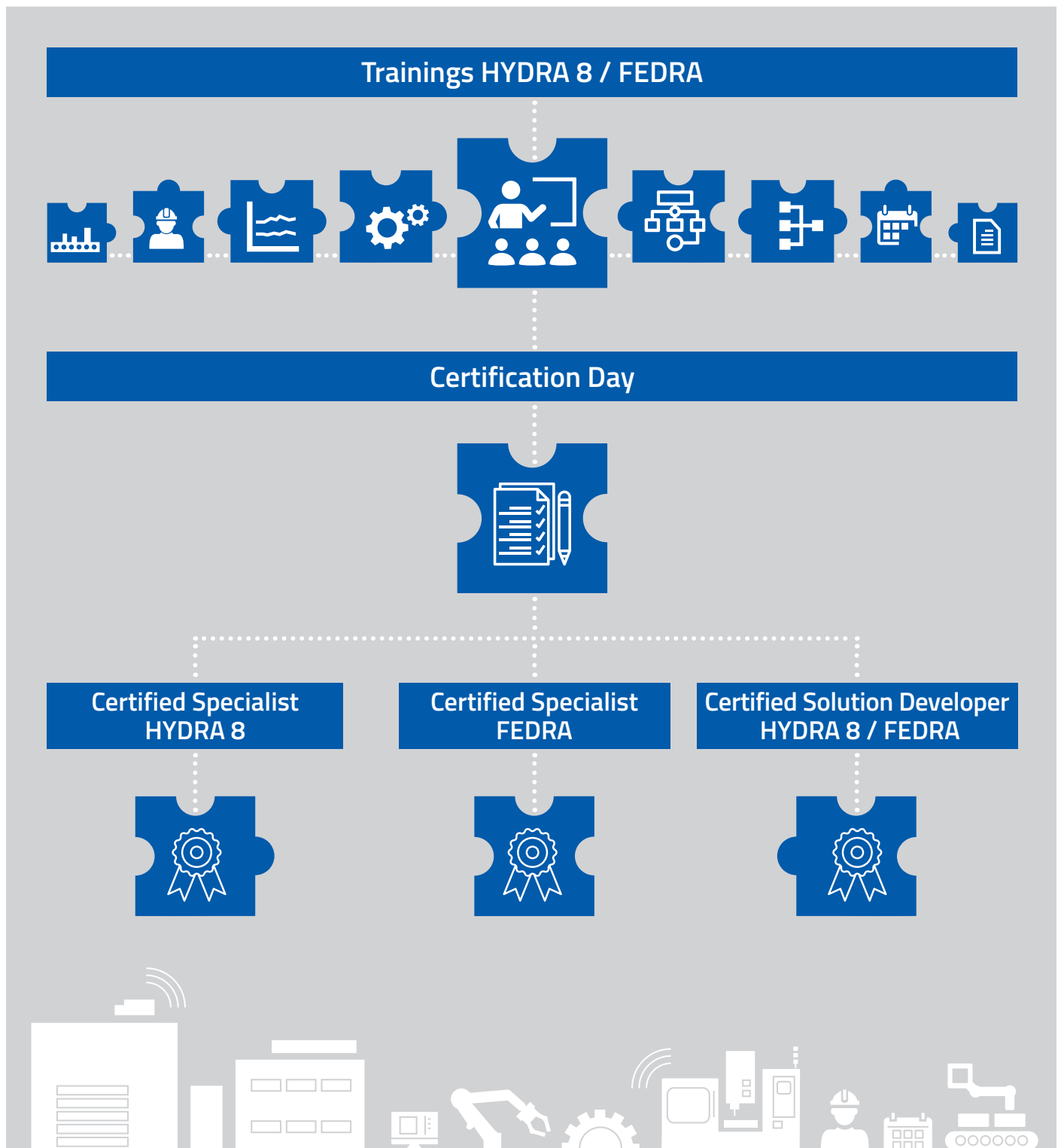
MPDV Asia Pte. Ltd.

298 Tiong Bahru Road
#11-03 Central Plaza
168730 Singapore
Phone +65 6836 7790
trainings.sg@mpdv.com

MPDV Shanghai Co., Ltd.

Unit 804, Caohejing Center
Building A 1520 Gumei Road
XuHui District
200336 Shanghai
Phone +86 21 5632 1032
trainings.cn@mpdv.com

Training and certification program





Basic Application Trainings



Basic Application Training FEDRA Advanced Planning & Scheduling

Booking Code	BAT-APS
Duration	3 Days

Perfectly plan and control production with FEDRA

Target group	Employees responsible for implementing FEDRA in the production environment and employees dealing with production planning, work preparation, production control and personnel scheduling.
Course objectives	You learn how to configure the system and operate the client. We explain how the FEDRA Interactive Planning works and how to use the FEDRA Workforce Planning as part of the Detailed Scheduling. During this training, you get to know the basic planning and information functions and you learn how to use them.
Requirement	You need not attend other training courses.
Contents	<p>Overview of the MPDV products</p> <ul style="list-style-type: none">- Integration of APS and FEDRA in the manufacturing environment- Interaction between the MPDV products <p>Introduction to the client and its operation</p> <ul style="list-style-type: none">- Operating the client- Authorization concept- Making evaluations/reports <p>Typical interfaces to other systems</p> <ul style="list-style-type: none">- Typical structure and processing of interfaces- FEDRA <> ERP <p>Structure of data types and master data</p> <ul style="list-style-type: none">- How to create, edit and manage data (master data / transaction data)- Creating sample master data <p>Implementing and operating the Shop Floor Scheduling</p> <ul style="list-style-type: none">- Settings- Planning profiles- Layout of the planning board- Manual planning- Setup change matrix- Production variants <p>Implementing and operating the Personnel Scheduling</p> <ul style="list-style-type: none">- Creating and assigning qualifications (qualification matrix)- Defining the personnel requirement (workplace, operation)- Performing the manual and automatic workplace assignment- Workplace and staff schedules



Basic Application Training HYDRA DNC Data Transfer

Booking Code	BAT-DNC
Duration	1 Day

Optimize and automate setup processes with HYDRA-DNC

Target group	Employees using DNC functions with the terminal and the MOC.
Course objectives	You get to know the HYDRA functions of DNC Direct Numerical Control. You know how the HYDRA shop floor terminals (AIP) work and which technical requirements are needed. You are in the position to perfectly integrate HYDRA-DNC in your company.
Requirement	Basic Application Training HYDRA Manufacturing (BAT-MF) Basic application training HYDRA Machine Data Collection (BAT-MDE)
Contents	<p>Presentation of basic DNC configurations</p> <ul style="list-style-type: none">- Basic structures- Management functions- Terminal settings- Machine assignment- Machine communication- DNC processes: alternative processes <p>Functions of the shop floor terminal</p> <ul style="list-style-type: none">- Authorization concept- Provision of DNC data records- Data transfer to the machine (download)- Upload of changed statuses <p>HYDRA MOC functions</p> <ul style="list-style-type: none">- DNC management of resource records- Dealing with statuses- Visualization and editing <p>Evaluations and reports</p> <ul style="list-style-type: none">- DNC logging, display and archive



Basic Application Training HYDRA Energy Management

Booking Code BAT-EMG

Duration 2 Days

Detect energy waste with HYDRA-EMG

Target group Employees managing, collecting and evaluating energy data.

Course objectives You get to know the functions of HYDRA Energy Management. This course communicates knowledge about configuration options and the different fields of application. Consequently, you are in the position to integrate the HYDRA basic functions into your business processes according to DIN EN ISO 50001.

Requirement Basic Application Training HYDRA Manufacturing Processes (BAT-MPR)
Basic knowledge of the HYDRA architecture and operation of the HYDRA client

Contents Introduction to EMG configuration and master data

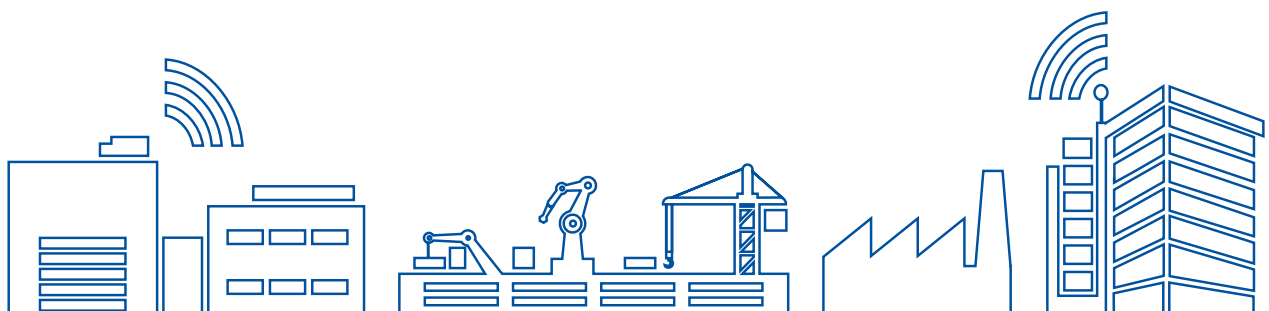
- Resource stock to manage counters/meters
- Definition and development of object structures and tree structures for classification purposes

Editing and collection functions of the HYDRA client

- Lock/unlock resources
- Plan the manual and automatic data collection
- Collect meter readings
- Billing and selection of periods
- Corrections
- Recording of measures

Overviews and evaluations/reports.

- Tabular/hierarchical energy consumption monitor
- Graphic energy monitor (layout-defined display)
- Power monitoring and analysis
- Hierarchical/tabular energy consumption analysis
- Order-related material consumption analysis, material movements
- Measure tracking

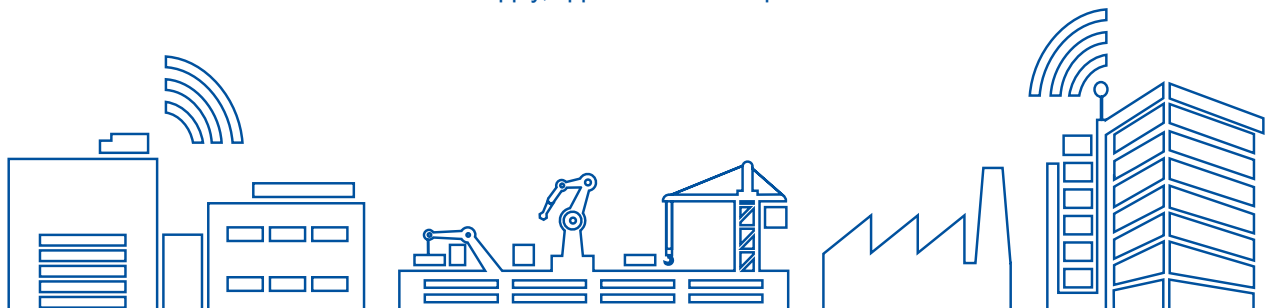


Basic Application Training HYDRA Human Resources

Booking Code	BAT-HHR
Duration	4 Days

Design personnel time management with HYDRA efficiently

Target group	Employees, responsible for the implementation of HYDRA Time & Attendance and Time Management. The course also addresses employees who are in charge of tasks in the HR department according time management.
Course objectives	You learn how to create/ edit master data and configurations. Also how to carry out evaluations and to use overviews or list functions. As well you will get to know how to brief other employees on system functions and how to use the personnel planning in an optimum way. The training includes basic knowledge and provides an overview of the various functions.
Requirement	You do not need to attend other training courses before.
Contents	<p>Functions of the PZE terminals</p> <ul style="list-style-type: none">- Clocking-in / -out- Information function <p>Create master data and define configurations</p> <ul style="list-style-type: none">- HR master data, wage types- Day types and models for flextime, shift and payment <p>Evaluations and data maintenance</p> <ul style="list-style-type: none">- Editing of clocking records, daily and monthly calculations- Listing of messages, keeping accounts- Shift and absence planning <p>Overview and list functions</p> <ul style="list-style-type: none">- Attendance / absence overview- Account balances, time sheet, absence overview- Clocking records, clocking archive, labor time and wage type statistics <p>Setup a KPI and information system</p> <ul style="list-style-type: none">- Clocking-in / -out- Actual account balance, balance journal, balance planning, remaining leave, Personnel time statistics <p>Setup own overviews and evaluations</p> <ul style="list-style-type: none">- wage types statistics- time sheet <p>Personnel scheduling and absence workflow</p> <ul style="list-style-type: none">- Basics of working time planning, absence and shift planning- Labor time schedule- Apply, approve/ decline requests



Basic Application Training HYDRA Material and Production Logistics

Booking Code	BAT-MPL
Duration	2 Days

Control and monitor the material flow with HYDRA-MPL

Target group	Employees responsible for material tracking and production inventory management.
Course objectives	You become familiar with the HYDRA functions for Material and Production Logistics (MPL) and Tracking & Tracing (TRT). This course communicates knowledge about configuration options and the different fields of application for the HYDRA modules MPL and TRT. This know-how can be directly integrated into your own company.
Requirement	Basic Application Training HYDRA Manufacturing (BAT-MF)
Contents	<p>Classification of MPL and TRT in the overall HYDRA system</p> <ul style="list-style-type: none">- Main features of MPL and TRT.- Application scenarios of MPL and TRT- Which applications are available? <p>Master data</p> <ul style="list-style-type: none">- Configuration of material types- Implementation of storage bins in material buffers- Further master data for special use cases <p>Data collection functions</p> <ul style="list-style-type: none">- Overview of data collection functions- Data collection functions of the terminal- Special functions of the office client <p>Overviews and evaluations/reports</p> <ul style="list-style-type: none">- Complete overview in the batch data overview- Tracking and tracing in batch tracing- Life cycle of a material object in the batch history- Further applications <p>Posting and uploads to the ERP system</p> <p>Exercises</p>

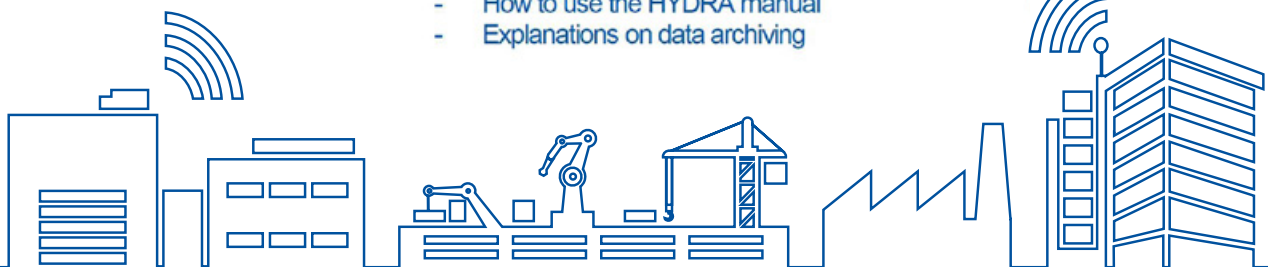


Basic Application Training HYDRA Manufacturing Processes

Booking Code	BAT-MPR
Duration	3 Days

Digitize manufacturing processes with HYDRA.

Target group	Employees responsible for implementing HYDRA in the production environment. The course also addresses supervisors, engineers and technicians in manufacturing and staff dealing with work scheduling and shop floor control.
Course objectives	Training to impart basic knowledge for users who want to use HYDRA to digitize their manufacturing processes. The training also presents functions to collect, use and evaluate order and machine data, material stocks, traceability, resource management and detailed planning.
Requirement	You do not have to complete other training courses.
Contents	<p>Introduction to HYDRA product groups</p> <ul style="list-style-type: none">- Classify the MES and HYDRA in the manufacturing environment- General use cases- Synergy of product groups <p>HYDRA object structure</p> <ul style="list-style-type: none">- Which HYDRA objects are available and how do they interact- Examples and use cases <p>Introduction to the clients and operation</p> <ul style="list-style-type: none">- How to operate the MOC, AIP and SMA- Integrate scanners, RFID chips, batches and labels- How to use evaluations/reports <p>Data collection and posting</p> <ul style="list-style-type: none">- Events and posting- Uploads to the ERP system- KPIs in MOC <p>Interfaces</p> <ul style="list-style-type: none">- How interfaces work and how they are structured- HYDRA <> ERP- HYDRA <> machines <p>Structure of data types and master data</p> <ul style="list-style-type: none">- General procedure to create, edit and manage data (master data /transaction data)- Create master data as examples <p>Best practice MF</p> <ul style="list-style-type: none">- Typical application scenarios and digitalization of manufacturing processes- Introduction of typical standard configurations and how their usage- Introduction of typical AIP, MOC and SMA functions <p>Tools to implement and use HYDRA</p> <ul style="list-style-type: none">- Implementation checklists- How to use the HYDRA manual- Explanations on data archiving



Basic Application Training HYDRA Administration MES Weaver

Booking Code	BAT-MW
Duration	2 Days

Administration and manage HYDRA as well as understanding the MES Weaver

Target group	HYDRA system administrators and employees responsible for system maintenance.
Course objectives	You learn how to administer the HYDRA system. You also learn how to install and implement the HYDRA MOC and the terminals. You become familiar with the relevant functions of the operating system (LINUX/Windows) and the database (SQL server). You learn how to analyze problems.
Requirement	You do not have to complete other training courses.
Contents	<p>HYDRA administration</p> <ul style="list-style-type: none">- MOC administration tools- User and password management- Installing the HYDRA MOC- Implementation of HYDRA terminals <p>Operation of the HYDRA server</p> <ul style="list-style-type: none">- HYDRA directory structure- Start and exit HYDRA- Interaction between HYDRA system components- Identification of failure causes <p>Database system SQL server</p> <ul style="list-style-type: none">- Start and stop database- Data backup- Monitoring database usage <p>Exercises</p>
Note	Please state the platform in use (operating system and database) upon registration.



Basic Application Training HYDRA Process Data

Booking Code	BAT-PDV
Duration	2 Days

Improve process stability with HYDRA-PDV

Target group	Supervisors, engineers and staff responsible for process quality and/or the evaluation of process data.
Course objectives	You become familiar with the HYDRA functions of process data collection. This course communicates knowledge about the interaction between process-related data collection planning and the options of process monitoring through extended collection options. Consequently, you can perfectly integrate the functions of HYDRA Process Data Collection into your business processes.
Requirement	Basic Application Training HYDRA Manufacturing Processes (BAT-MPR)
Contents	<p>Introduction to Process Data Collection and system architecture</p> <ul style="list-style-type: none">- Master data maintenance and basic configurations- Inspection planning- Configuration and implementation of data collection and machine connection <p>Evaluations and reports</p> <ul style="list-style-type: none">- Online visualization in the terminal and MOC- Measurement analysis of recorded data displayed as data table or in graphics- Generating samples and evaluations, such as control charts <p>Failure mode analysis</p> <p>TRT (Tracking and Tracing) basics</p> <p>Exercises</p>



Basic Application Training HYDRA Quality Management

Booking Code	BAT-QMG
Duration	3 Days

Set quality standards with HYDRA

Target group	Employees implementing HYDRA as CAQ system or who are responsible for inspection planning, measurement recording and test equipment management.
Course objectives	You learn how to create inspection plans and inspection steps. You also learn how to apply the measurement recording including the HYDRA standard evaluations of production and the goods receipt. This also includes the development of calibration plans and the management and calibration of test equipment in HYDRA.
Requirement	You do not have to complete other training courses.
Contents	<p>Edit basic data</p> <ul style="list-style-type: none">- Identify and edit required master data (articles, characteristics, failure types, failure locations, measures, etc.)- Generate master data groups (e.g. groups of articles and failures) for effective inspection planning and evaluation- Dynamic modification <p>Inspection planning</p> <ul style="list-style-type: none">- Create (group) inspection plans for different areas (goods receipt, production, calibration)- Optimum use of different characteristic types (variable, attributive, inspection chart, visual defects recording, etc.)- Define inspection due dates and inspection documents <p>Collect inspection data</p> <ul style="list-style-type: none">- Collect inspection data, assign failures and take action- Correct inspection data <p>Evaluations and reports</p> <ul style="list-style-type: none">- Statistical evaluation and failure mode analysis- Print inspection certificates <p>Test equipment management</p> <ul style="list-style-type: none">- Plan and perform calibrations <p>Exercises</p>



Basic Application Training HYDRA Machine Data and Shopfloor Integration

Booking Code	BAT-SFI
Duration	2 Days

Increase productivity with collection of machine data

Target group	Employees who are responsible for the implementation of HYDRA in the production environment, supervisors, engineers and staff dealing with machine-related evaluations / reports and overviews.
Course objectives	You become familiar with the functions of the HYDRA product group Machine Data Collection (MDE). Extend your know-how by means of use case oriented introduction of typical digitalization possibilities according collection, usage and evaluation of machine data in the system.
Requirement	Basic Application Training HYDRA Manufacturing Processes (BAT-MPR)
Contents	Idea of machine data collection in HYDRA Configuration of shop floor (BDE) terminals for machine data collection <ul style="list-style-type: none">- Automatic collection of quantities- Automatic status monitoring MDE terminal functions Machine downtimes and malfunctions Using the MOC Introduction to application-specific configurations Complex status models Escalation messages from HDRA MDE Central / decentralized machine data collection Advanced calculations and configurations Detailed best practice methods from the HYDRA machine data environment Exercises



Basic Application Training HYDRA Tool and Resource Management

Booking Code	BAT-WRM
Duration	1 Day

Minimize maintenance and setup costs with HYDRA-WRM

Target group	Employees responsible for tool and resource management.
Course objectives	You become familiar with the functions of the Tool and Resource Management (WRM) This course communicates knowledge about configuration options and the different fields of application. Consequently, you can perfectly integrate the basic functions of HYDRA-WRM into your business processes.
Requirement	Basic Application Training HYDRA Manufacturing (BAT-MF) We also recommend completing the course Basic Application Training HYDRA Shop Floor Data Collection (BAT-BDE).
Contents	<p>Introduction to WRM configuration</p> <ul style="list-style-type: none">- Resource stock- Define characteristics, measures and blocking reasons <p>Editing and collection functions of HYDRA MOC</p> <ul style="list-style-type: none">- Lock/unlock resources- Order-related posting of resources- Integrate resource posting into existing BDE applications- Enter measures for documentation purposes- Dealing with documents as part of maintenance <p>Overviews and evaluations/reports</p> <ul style="list-style-type: none">- Overview, information, usage, history and assignment of resources <p>Exercises</p>





Extended Application Trainings



Extended Application Training HYDRA Administration

Booking Code	EAT-ADM
Duration	1 Day

HYDRA administration for advanced users

Target group	HYDRA users responsible for administration and system maintenance and MPDV implementation partners
Course objectives	You gain HYDRA insider knowledge. You obtain detailed knowledge of the HYDRA system communication. You also learn how to apply various analysis options in case of problems. This training course also communicates the perfect workflow how to deal with support requests (from the issue to the request).
Requirement	Basic Application Training HYDRA Administration MES Weaver (BAT-MW) Basic knowledge of HYDRA applications
Contents	<p>Becoming familiar with the HYDRA architecture</p> <ul style="list-style-type: none">- HYDRA communication technologies: MOC server- HYDRA communication technologies: terminal server- HYDRA server programs <p>HYDRA administration tools</p> <ul style="list-style-type: none">- Logging and analysis of terminals- Logging and analysis of the MOC- Logging and analysis of servers- Logging and analysis of interfaces- Update management <p>Exercises to assess errors / breakdowns / emergencies</p> <ul style="list-style-type: none">- Examples for potential problems- Interpreting system logs- First steps to an independent analysis <p>Exercises</p>
Note	Please state the platform in use (operating system and database) upon registration.



Extended Application Training MES Terminal

Booking Code	EAT-AIP
Duration	1 Day

User-friendly configuration of HYDRA shop floor clients

Target group	HYDRA users responsible for the configuration of the MES terminal.
Course objectives	You receive an overview of use cases that can be met by configurations and setting options of the HYDRA data acquisition program (AIP = Acquisition and Information Panel). Completing the course, you can make use of the diverse configuration options for dialogs, dialog fields, formats, buttons and you know how to apply them appropriately.
Requirement	Basic Application Training HYDRA Manufacturing Processes (BAT-MPR)
Contents	<p>Application-related introduction to typical configurations for the MES data acquisition program (AIP2).</p> <p>Detailed presentation of technical options for dialog configuration:</p> <ul style="list-style-type: none">- Dialog structure- Dialog fields, labeling and units- Data types of dialogs including value ranges- Buttons and labeling- Displaying and adding columns to lists <p>Presentation of practical examples</p> <p>Specifications for professional management of modified configurations</p> <p>Specifications for safe handling of configurations in the HYDRA system</p> <p>Exercises</p>



Extended Application Training FEDRA Advanced Planning & Scheduling

Booking Code	EAT-APS
Duration	2 Days

Perfectly plan and control production using the extended FEDRA functions

Target group	Employees dealing with production planning, work preparation and production control.
Course objectives	You get to know the extended functions of the FEDRA production planning and learn how to use the available planning and information functions. We explain how to use the functions of the Advanced Resource Planning, Advanced Planning and Optimization and Advanced Process Modeling.
Requirement	Basic Application Training FEDRA Advanced Planning & Scheduling (BAT-APS).
Contents	<p>Advanced Resource Planning</p> <ul style="list-style-type: none">- Resource availability- Assignment of secondary resources- Multiple assignment of resources- Material availability check <p>Advanced Planning and Optimization</p> <ul style="list-style-type: none">- Automatic assignment: how to use priority and capacity selection rules- Automatic assignment – step by step- Cognitive planning with artificial intelligence (Reinforcement Learning) <p>Advanced Process Modeling</p> <ul style="list-style-type: none">- Order networks- Overlapping of operations- Joint production- Campaign production



Extended Application Training HYDRA Quality Management

Booking Code	EAT-CAQ
Duration	1 Day

Fully exploit HYDRA as part of Quality Management

Target group	HYDRA CAQ system administrators.
Course objectives	You will learn how HYDRA-CAQ works with regard to statuses, options and areas. You can use your knowledge of system configurations to display or change statuses, options and areas. You will also learn how to configure the AIP inspection process. This also includes the configurations for the expanded view of quality data on the AIP terminal.
Requirement	Basic Application Training HYDRA Quality management (BAT-QMG)
Contents	<p>Introduction how to change system behavior by modifying configurations for statuses, options and areas</p> <p>Presentation of the options available if you define options and statuses for specific areas.</p> <p>Explanation of the differences between status type and status as well as area and area type</p> <p>Optimization of the AIP inspection process by changing configurations</p> <p>Introduction how to configure the expanded view of quality data in the AIP</p> <p>Exercises</p>



Extended Application Training HYDRA Data Maintenance and Correction

Booking Code	EAT-COR
Duration	1 Day

Understand, edit and correct collected data, events and postings

Target group	Personnel responsible for the HYDRA rollout in production, technicians and employees that comprehend recording and postings and edit data in sense of corrections.
Course objectives	Training to impart with application-related presentation of typical maintenance and correction workflows for data collected in the HYDRA manufacturing environment. As well you can comprehend in how far corrections have an impact on evaluations.
Requirement	Basic Application Training HYDRA Manufacturing Processes (BAT-MPR)
Contents	<p>Idea of event collection and postings in HYDRA Introduction to HYDRA data collection, events and postings Structure of evaluations and interfaces Edit and/or correct events and postings Impact of editing and/or correction on evaluations and interfaces</p> <ul style="list-style-type: none">- Use cases- Learning by doing (exercises)- Test the relevant data collection and posting- Comprehend postings within the system <p>Detailed Best Practice examples Further examples</p>



Extended Application Training Process Communication Controller

Booking Code	EAT-PCC
Duration	2 Days

Configure and use the Process Communication Controller (PCC)

Target group	Administrators and employees who are responsible for the maintenance of the technical data acquisition hardware for HYDRA.
Course objectives	You become familiar with the HYDRA data collection methods. You become familiar with the data acquisition hardware supported by HYDRA (terminal and control types). You also learn how machine communication works in the HYDRA system. In addition, you learn how to connect OPC and specific protocols, such as PCC-DIF.
Requirement	You do not have to complete other training courses.
Contents	<p>Introduction to how data can be collected via terminals</p> <p>Introduction to the PCC architecture to collect machine data</p> <ul style="list-style-type: none">- Basic functionality and channel principle- Protocol modules <p>Introduction to the different options of machine communication</p> <p>Presentation of different scenarios of data collection referring to the</p> <ul style="list-style-type: none">- HYDRA product groups- Type of collected data <p>Presentation of the PCC Configuration Manager</p> <ul style="list-style-type: none">- Create PCC configuration- Online browsing of specific connection technologies (OPC-UA)- Storage system for PCC configurations <p>Introduction to the OPC communication technology</p> <ul style="list-style-type: none">- OPC server (DA / UA)- OPC client <p>Introduction to configuration basics and MOC examples</p> <p>Exercises and troubleshooting</p>



Development Trainings



Customization Training MES Services (Acquisition & Information)

Booking Code	CUT-AIS
Duration	5 Days

Develop, extend and change MES Services (Acquisition & Information)

Target group	HYDRA users who would like to change standard processing of data collection.
Course objectives	You become familiar with the customization options of data collection and data posting. You learn how to develop individual scripts to customize HYDRA processing for data collection and posting. You also get to know the customization options provided by the HYDRA terminal.
Requirement	Customization Training HYDRA Database (CUT-HDB) Basic knowledge of software development and HYDRA applications.
Contents	<p>User exits to change data collection and processing (HYMW). You can create additional plausibility checks or extend the lists displayed via the terminal (e. g. expanded order list).</p> <p>Basic knowledge of the Production Data Manager (PDM). Information on used dialog strings to collect and request data.</p> <p>Generate individual tables in a customer-specific HYDRA namespace.</p> <p>Individual modifications to the HYDRA dialog control by customizing the AIP dialog configuration</p> <p>Design new, customized dialogs</p> <p>Individual layout design of the GUI</p> <p>Use scripts to control HYDRA terminal processing</p> <p>Dealing with developments / configurations on the customer's system</p> <p>Exercises</p>

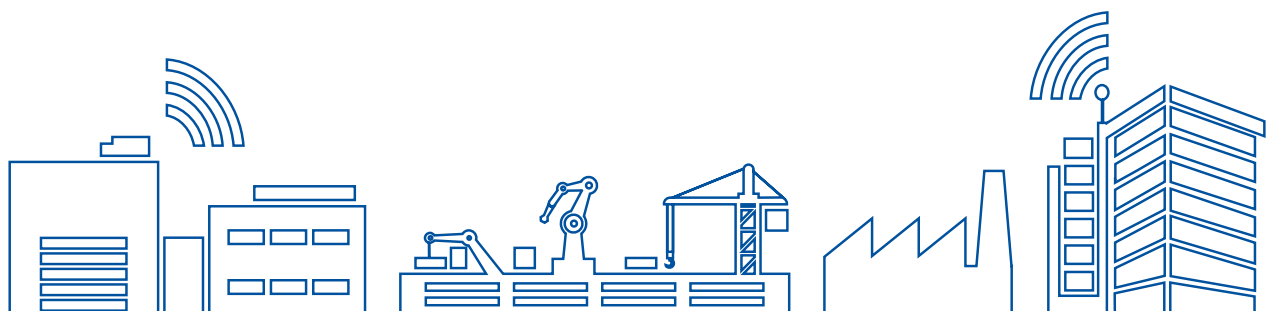


Customization Training HYDRA Label Design

Booking Code	CUT-ETD
Duration	2 Days

Configure, apply and exploit label design with HYDRA

Target group	HYDRA users who design and edit print layouts of labels/accompanying documents as well as MPDV implementation partners.
Course objectives	You become familiar with the design options supported by HYDRA. You can design your own documents using the HYDRA Label Designer. You can integrate these documents into input dialogs.
Requirement	Customization Training HYDRA Database (CUT-HDB) Basic knowledge of HYDRA applications Basic knowledge of software development
Contents	<p>HYDRA Label Designer</p> <ul style="list-style-type: none">- Basic structure- Prepare HYDRA data for the print layout <p>Assigning labels to HYDRA input dialogs</p> <ul style="list-style-type: none">- Label configuration- Label assignment- Schema configuration- Conditional print instructions- Exercises based on predefined tasks <p>Design techniques</p> <ul style="list-style-type: none">- Display additional fields from the HYDRA database- Introduction to HYDRA Script <p>Exercises</p>

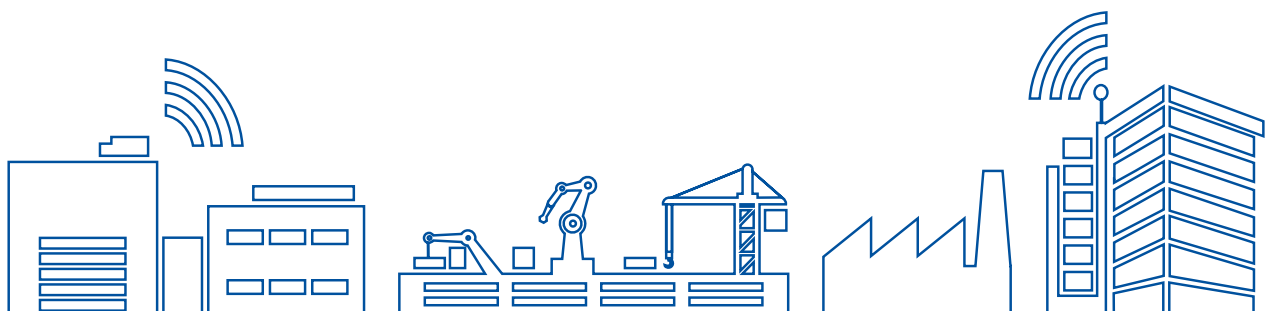


Customization Training HYDRA Database

Booking Code	CUT-HDB
Duration	1 Day

Understanding and using the HYDRA database

Target group	HYDRA users who would like to develop their own reports/evaluations by accessing the database.
Course objectives	You become familiar with the data structures and their interrelations in the HYDRA database. This training course represents the basis for individual data selection, which will be explained in more detail during other customization training courses.
Requirement	Basic knowledge of HYDRA applications, SQL and databases Basic knowledge of software development
Contents	<p>Introduction to the database system</p> <ul style="list-style-type: none">- Theory of relational databases- Terminology of database systems <p>SQL query language</p> <ul style="list-style-type: none">- SQL query tools in the HYDRA environment- Exercises based on predefined tasks- Optimization of queries <p>Becoming familiar with the HYDRA database structure</p> <ul style="list-style-type: none">- Structure of the MES system's database tables relevant to applications- Meaning of the fields in database tables- Logical relations between individual database tables- Usage in HYDRA <p>Exercises</p>

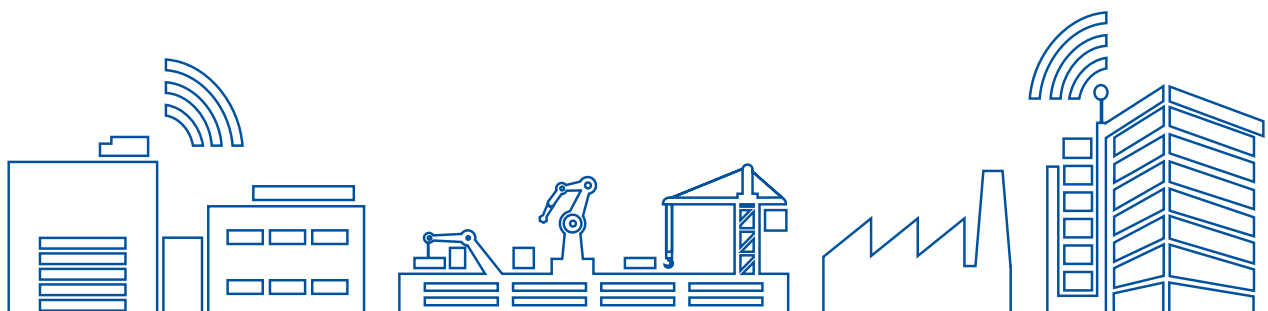


Customization Training HYDRA Measuring Equipment Interface

Booking Code	CUT-IMI
Duration	2 Days

Connect complex measuring systems with HYDRA

Target group	HYDRA users or MPDV implementation partners who would like to transfer inspection data (e.g. measured values) from third-party systems (measuring machines, or similar) to HYDRA.
Course objectives	You become familiar with three options to import inspection data from third-party systems (irrespective of MDI) to HYDRA. You can solve complex tasks concerning the inspection data import and customize the processes accordingly. This training also communicates the necessary basic knowledge of alternative inspection data interfaces. This is useful if the options provided by the HYDRA Measurement Data Interface (MDI) do not meet the requirements and/or importing of inspection results cannot be realized with the manual HYDRA inspection results recording process
Requirement	Basic Application Training HYDRA Quality Management (BAT-QMG)
Contents	<p>Introduction</p> <ul style="list-style-type: none">- Distinction from the HYDRA Measurement Data Interface (MDI)- Scenarios of inspection data import <p>HYDRA Production Data Manager (PDM)</p> <ul style="list-style-type: none">- Brief overview- How to use dialog data- Offline batch interface and logging <p>Data structures</p> <ul style="list-style-type: none">- Inspection data collection based on inspection points vs. based on samples- Special features of attributive and variable characteristics- Important HYDRA objects and their identifiers- Using alternative identifiers <p>Implementation of individual requirements</p> <ul style="list-style-type: none">- Overview of the most important QM data structures- Customizations with HYDRA Script <p>Exercises</p>
Note	This course does not provide further profound information about the Production Data Manager (online connection, etc.). For further requirements, we recommend completing the Customization Training HYDRA Database (CUT-HDB).

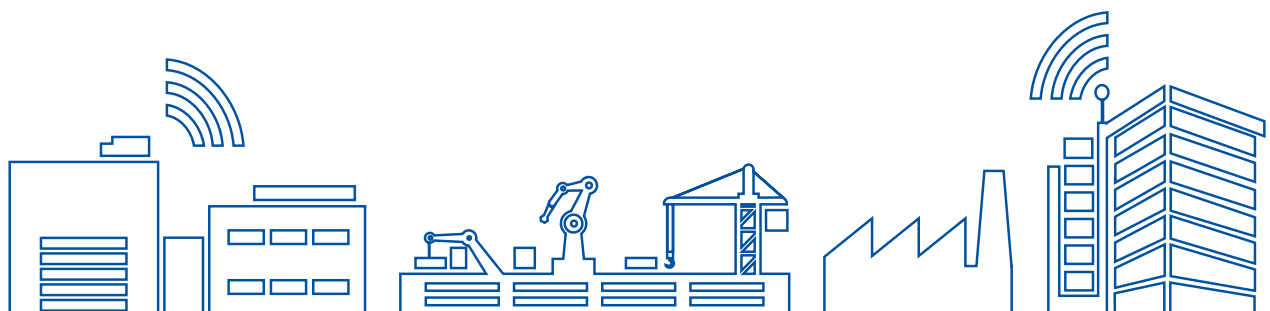


Customization Training Enterprise Integration

Booking Code	CUT-MLE
Duration	3 Days

Customize interfaces to Enterprise Systems

Target group	HYDRA users who would like to change the MLE interface independently.
Course objectives	You learn how to use and customize MLE communication for the advanced data exchange.
Requirement	Customization Training HYDRA Database (CUT-HDB) Basic knowledge of HYDRA applications Basic knowledge of software development and the MDS-MLE development license
Contents	<p>Introduction to the different options of using the MLE communication for the advanced data exchange</p> <p>MES Link Enabling, configuration and implementation</p> <p>You learn how to process and use MES Link Enabling</p> <p>You learn how to customize the MLE interface via the MOC client:</p> <ul style="list-style-type: none">- Fields- Processing <p>Develop a separate MLE version for a new data structure (inbound transactions)</p> <p>User exits to control processing of the MLE interface (inbound transactions)</p> <p>User exits to control processing of the MLE interface (outbound transactions)</p> <p>Create a separate, customized MLE outbound segment</p> <p>Exercises</p>

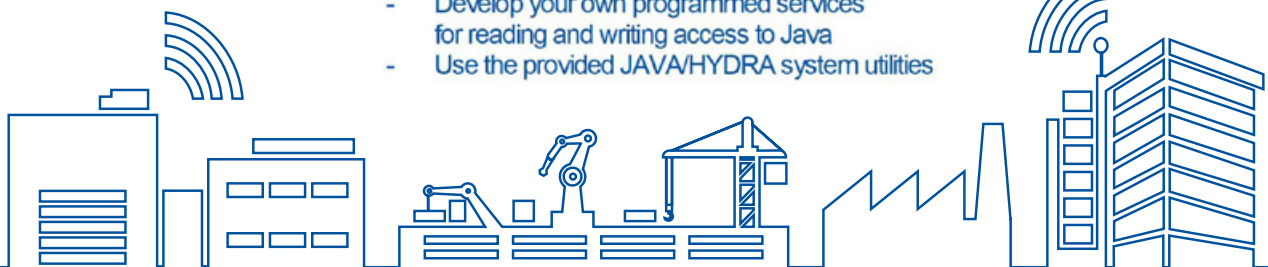


Customization Training MOC Applications &

Booking Code	CUT-MOC
Duration	7 Days

Develop, upgrade and change MOC applications

Target group	HYDRA users who would like to make changes to the MOC client.
Course objectives	You become familiar with the MOC customization options. Learn how to view the required information via the MOC client and to change the MOC display properties. Create own services for read and write access to HYDRA database and learn how to create MOC editing applications and to change existing services in Java.
Requirement	<p>Customization Training HYDRA Database (CUT-HDB)</p> <p>Technological knowledge:</p> <ul style="list-style-type: none"> - Basic knowledge of HYDRA applications - Basic knowledge of SQL - Basic knowledge of JAVA, Eclipse or IntelliJ IDEA - Basic knowledge of .NET development in C# is required if you want to create individual "extensions"
Contents	<p>Introduction to the MOC customization options</p> <p>Customizing existing applications and search screens</p> <ul style="list-style-type: none"> - Modify the layout of MOC applications by drag&drop - Integrate any data sources for selection lists - Adapt entries to your company's internal vocabulary - Change/replace icons and graphics - Use the "extensions" available by default to change the application - Create your individual "extensions" using .NET in C# <p>Creating customized applications and evaluations:</p> <ul style="list-style-type: none"> - Create applications based on existing data sources and SQL queries - Integrate detail applications based on tables, detail views and diagrams with master-detail relations - Configure graphical components, such as pie charts, bar charts, line graphics and pivot applications - Navigation functions and drill-down reports - Integrate your customized applications into the MOC menu <p>Using the HYDRA repository as service documentation to define and configure services and to define GUI properties:</p> <ul style="list-style-type: none"> - Create your own reading services as data sources for applications - Create writing services (insert, update, delete) to edit customer-specific tables using the BAPI Interpreter - Define GUI properties of data fields <p>Using Java to implement your service requirements:</p> <ul style="list-style-type: none"> - Change existing, interpreted services using user exits - Develop your own programmed services for reading and writing access to Java - Use the provided JAVA/HYDRA system utilities

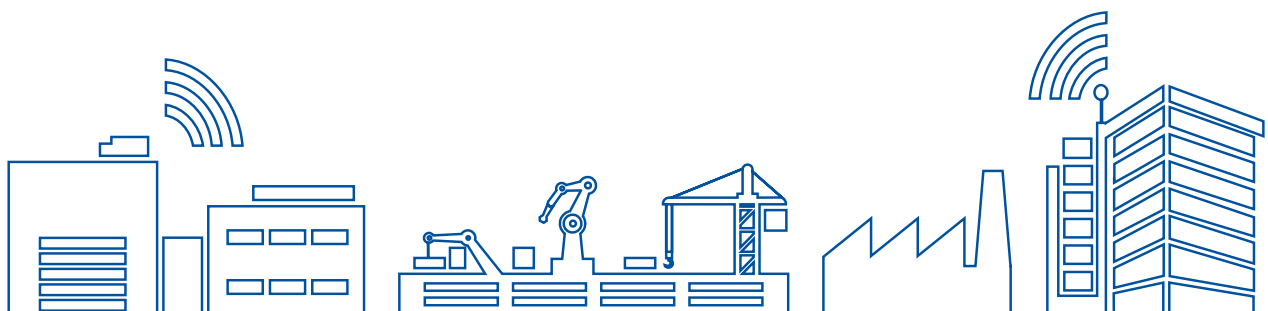


Customization Training Process Communication Controller

Booking Code	CUT-PCC
Duration	2 Days

Design individual solutions for machine connection

Target group	HYDRA administrators and employees who are responsible for the maintenance of technical data collection hardware, the independent development of machine drivers and the PCC customization.
Course objectives	You become familiar with all PCC customization options in HYDRA. You learn how to develop individual PCC drivers and PCC-ADP scripts.
Requirement	Extended Application Training <i>Process Communication Controller</i> (EAT-PCC) Basic knowledge of HYDRA applications Basic knowledge of software development and the MDS-PKE development license
Contents	<p>Basics of the PCC technology</p> <ul style="list-style-type: none">- HYDRA channel principle- Classification in the overall HYDRA system <p>Developing individual PCC drivers and PCC ADP scripts to extend the HYDRA Process Communication Controller (PCC). You can connect the PCC to machines, equipment and other peripheral devices.</p> <ul style="list-style-type: none">- Interface technology- Communication interfaces HYDRA-PCC and PCC driver- Implementation notes for PCC drivers <p>This course communicates customization knowledge for users and developers who would like to create PCC drivers and ADP scripts on their own.</p> <p>You become familiar with the structures and procedures of HYDRA-PCC and PCC-ADP</p> <p>Introduction to HYDRA PDM dialogs</p> <p>Basics of PCC driver programming and ADP scripting</p> <p>Exercises for driver development and ADP scripting</p>



Customization Training HYDRA Report Design

Booking Code	CUT-RPD
Duration	3 Days

Creating reports with the HYDRA Report Designer

Target group	HYDRA users who would like to create and design reports via the MOC.
Course objectives	You become familiar with the functions and options provided by the MOC Report Designer.
Requirement	Customization Training <i>HYDRA Database (CUT-HDB)</i> Basic knowledge of HYDRA applications Recommended: basic knowledge of design tools and basic concepts of computer science
Contents	Customizing existing applications/search screens: <ul style="list-style-type: none">- Modify the layout of MOC applications by drag&drop- Integrate any data sources for selection lists- Adapt entries to your company's internal vocabulary- Change/replace icons and graphics List & Label basics Modify existing MOC reports Design new reports and integrate these reports in the MOC Integrate your customized applications into the MOC menu. System-wide deployment and distribution How to use the service documentation Exercises

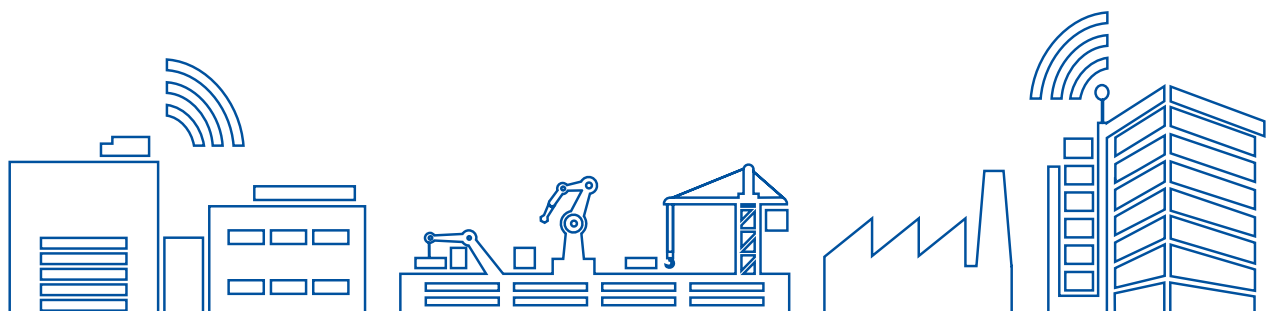


Customization Training Smart MES Applications

Booking Code	CUT-SMA
Duration	2 Days

Develop mobile and web-based applications on your own

Target group	Administrators for mobile HYDRA applications (Smart MES Applications) who would like to make changes to the system.
Course objectives	You learn the basics of Smart MES Applications and understand the underlying architecture to carry out configurations and customizations.
Requirement	Customization Training MOC Applications & Services (CUT-MOC) Basic knowledge of software development (recommended: knowledge of HTML5, CSS, JavaScript, JQuery) Basic knowledge of HYDRA Knowledge of the MPDV Repository Client
Contents	Getting to know the basic customization options of SMA applications Configure your individual input dialogs and develop your individual applications using examples Analysis of sample applications Exercises



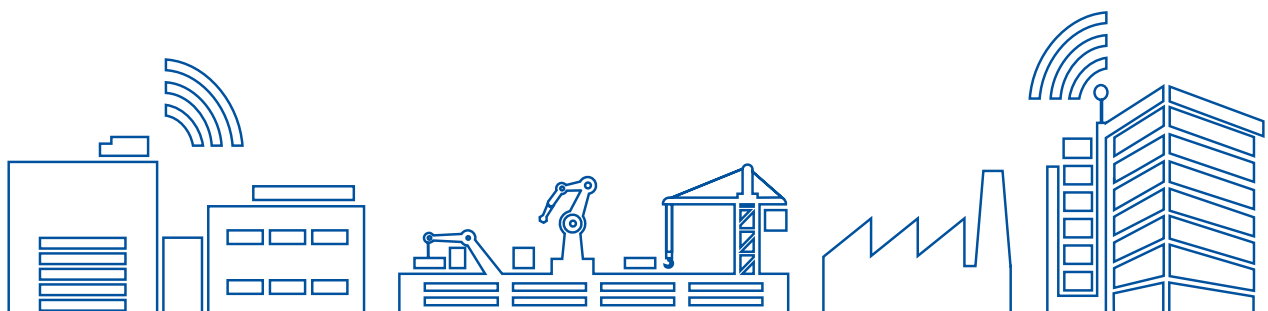


Live Classes



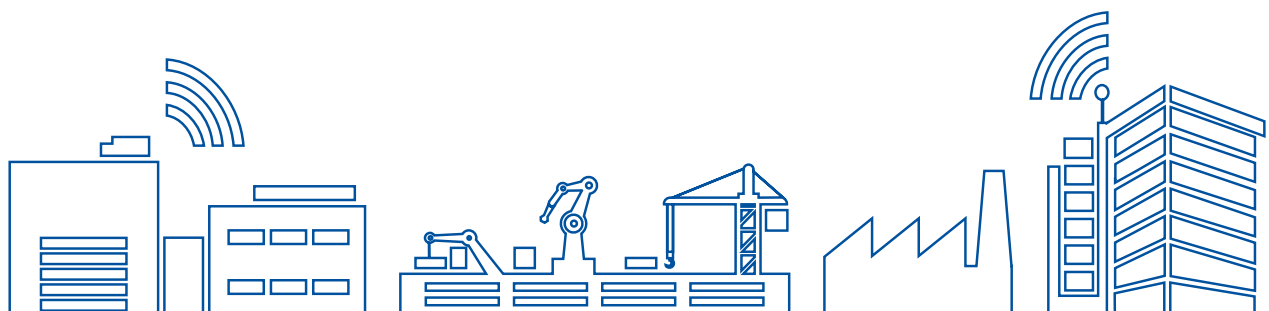
Live Class Administration of the ERP Interface

Booking Code	LC-ERP
Duration	½ a Day
Target group	HYDRA administrators and IT experts who manage the interface between HYDRA and the ERP and would like to deepen their knowledge or optimize servicing.
Course objectives	<p>You will learn the optimal handling of our standard interfaces for communication between HYDRA and ERP systems: HYDRA offers a wide range of standard interfaces for transferring a variety of data to different ERP systems with the help of the MES Link Enabling (MLE).</p> <p>In this course, we will show you the standard interfaces most frequently used in HYDRA and provide an overview of different technical options for data transfer. You will also learn how to monitor and control HYDRA inbound and outbound transactions and how to troubleshoot yourself.</p>
Requirement	Participation in other trainings is not required.
Contents	<p>Introduction</p> <ul style="list-style-type: none">- Integration into the MES HYDRA system environment- Overview of various interfaces and communication technologies to ERP systems such as SAP, Infor or proALPHA <p>Use of the HYDRA standard tool MES Link Enabling</p> <ul style="list-style-type: none">- Structure and processing of interface communication- Sample configuration and setup of interfaces- Monitoring and troubleshooting by using inbound and outbound transactions <p>Best Practice</p> <ul style="list-style-type: none">- Connecting SAP standard interfaces with RFC/IDoc- Example processing of data using the fileport- Best practice for administration, monitoring and troubleshooting



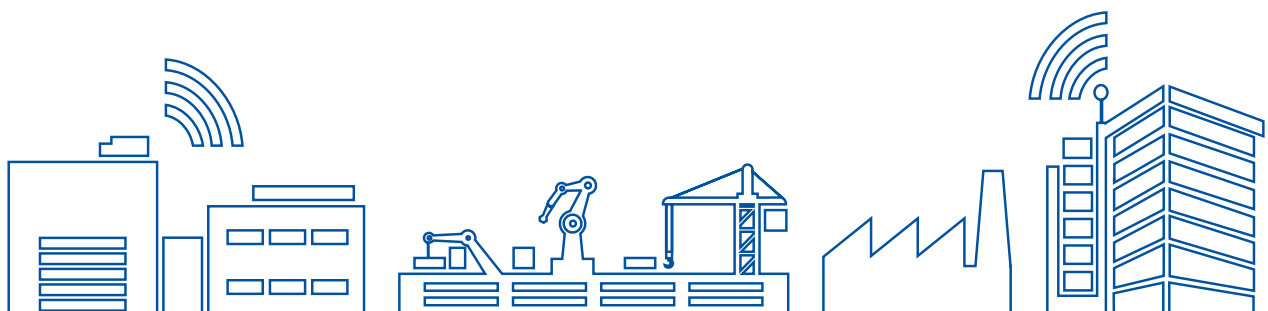
Live Class Digital Communication (in the Shop Floor / in Production) with HYDRA

Booking Code	LC-INF
Duration	½ a Day
Target group	Digitization officers, MES project managers and HYDRA key users with the aim of achieving a transparent flow of information in real time using HYDRA in your production.
Course objectives	<p>Get to know HYDRA as a tool for information distribution: With the help of the integrated Escalation Management and the HYDRA Messaging Services, HYDRA supports both the automated and systemic distribution of current data and information. HYDRA also makes sure that messages are forwarded from one person to another.</p> <p>Get to know the functions provided by the HYDRA standard to optimize your information flow and understand how to use them efficiently with the help of practical examples.</p>
Requirement	Participation in other trainings is not required.
Contents	<p>Introduction</p> <ul style="list-style-type: none">- Digital communication as the key to success through greater transparency and rapid information flow.- What information and messages are required in the shop floor? <p>Introduction to various functions to distribute messages and information</p> <ul style="list-style-type: none">- Escalation Management - setup and configuration for automated event messages- HYDRA Messaging Service - direct communication between colleagues in HYDRA- Collect information and comments on terminals - simplify communication between different levels <p>Best practice</p> <ul style="list-style-type: none">- Sample configurations for automated events-based messaging in HYDRA, from toolmaking all the way to maintenance and the ERP interface- Communication between planning, shop floor and controlling using comments and long texts integrated in HYDRA



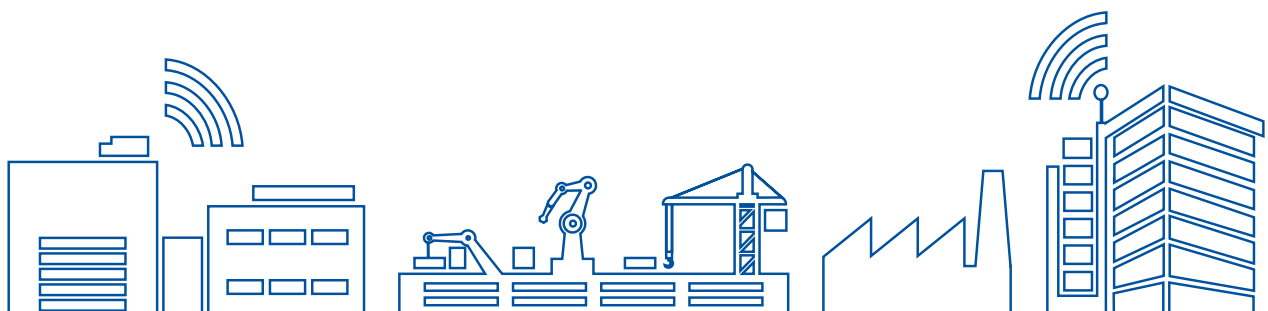
Live Class HYDRA Interoperability

Booking Code	LC-IOP
Duration	½ a Day
Target group	MES project managers and IT experts who want to use the communication between HYDRA and third-party systems more effectively.
Course objectives	<p>Get to know HYDRA as a data hub: Thanks to our open data model and diverse interfaces, you can quickly and smoothly access substantial production data and live events from HYDRA with your third-party systems. We will show you how to use connectivity options provided in the HYDRA standard or how to implement your future undertakings with the help of extensions.</p>
Requirement	<p>Good knowledge of MES HYDRA and its integration into the typical system environment Technical understanding of data exchange between different systems</p>
Contents	<p>Introduction</p> <ul style="list-style-type: none">- MES HYDRA as data hub- Applications to exchange data from HYDRA with other systems, such as dashboards, data warehouses or BI solutions <p>Presentation of various interfaces and their intended use, including their technological and syntactic structure.</p> <ul style="list-style-type: none">- Service interface: interaction with HYDRA via the REST interface- Machine and process data as live events from the shop floor by using the Factory Collaboration Hub and MQTT- Advantages and disadvantages of different connection options <p>Best practice</p> <ul style="list-style-type: none">- How to use the service interface (service tester and repository client) including practical examples (e.g. direct export of an E-report)- Integrate live data from production via the Factory Collaboration Hub including data visualizations. Shown with an open source dashboard as an example



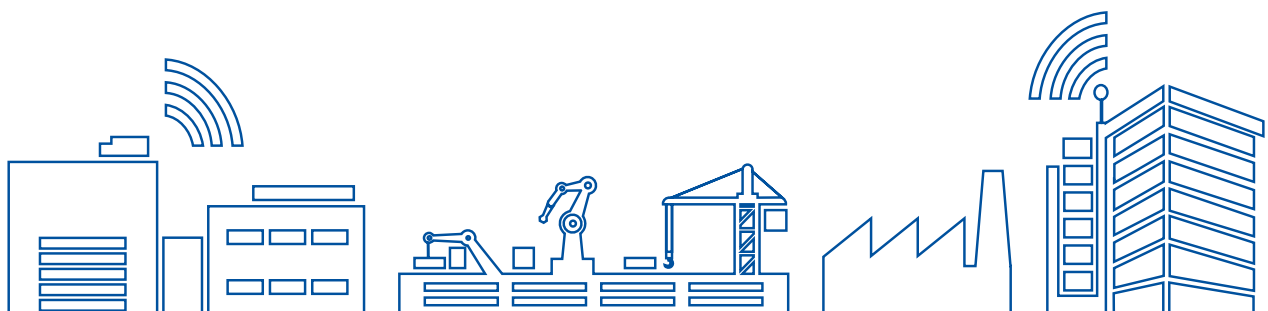
Live Class Perfect Machine Connection with HYDRA

Booking Code	LC-MAA
Duration	½ a Day
Target group	Technical experts and HYDRA key users about to connect new machines or who want to further optimize current usage.
Course objectives	<p>Get to know the options to connect machines with HYDRA: Thanks to a variety of technologies supported in the HYDRA standard you can connect machines, systems and controls and easily process live data from the shop floor in HYDRA.</p> <p>We will show you options to connect machines provided in the HYDRA standard. You will learn about functions and get tips and tricks to connect new machines.</p>
Requirement	<p>Participation in other training courses is not required.</p> <p>Basic knowledge of the functions of the HYDRA Machine Data (MDE) module</p> <p>Basic understanding of machine connections and data exchange in the shop floor</p>
Contents	<p>Introduction</p> <ul style="list-style-type: none">- Machine data collected with MES HYDRA <p>Presentation of the various tools and standards for machine connection as well as their functions and intended uses</p> <ul style="list-style-type: none">- OPC- MTConnect- MQTT- Euromap 63- IIoT Connector <p>Best practice</p> <ul style="list-style-type: none">- Tips and tricks to connect machines- Configuration and setting of drivers and data queries <p>What insights can be deduced from the machine data</p>



Live Class Use the Reporting in HYDRA Efficiently

Booking Code	LC-REP
Duration	½ a Day
Target group	Production managers, management team members and HYDRA users who want to identify optimization needs and derive data-based measures with the help of evaluations and KPIs from HYDRA.
Course objectives	Get to know HYDRA as an effective reporting tool: What are the most important KPIs for your company and how do you analyze them accurately with HYDRA? You will find out how to set up and manage your reports with HYDRA. Based on best practice examples, you will learn what you can achieve by using KPIs effectively.
Requirement	Participation in other training courses is not required. Basic knowledge of HYDRA functions and how to use KPIs in production
Contents	<p>Introduction</p> <ul style="list-style-type: none">- Why KPIs and which ones?- KPIs in HYDRA and how to find them <p>Presentation of specific reports and KPIs in HYDRA</p> <ul style="list-style-type: none">- Quality and quantity KPIs- Process KPIs- The OEE, its components and what HYDRA can offer to you <p>Best practice of our customers: Using key figures to achieve greater efficiency and cost savings, e.g.:</p> <ul style="list-style-type: none">- Achieve higher utilization levels on machines- Analyze scrap reasons and derive measures





Practical Trainings

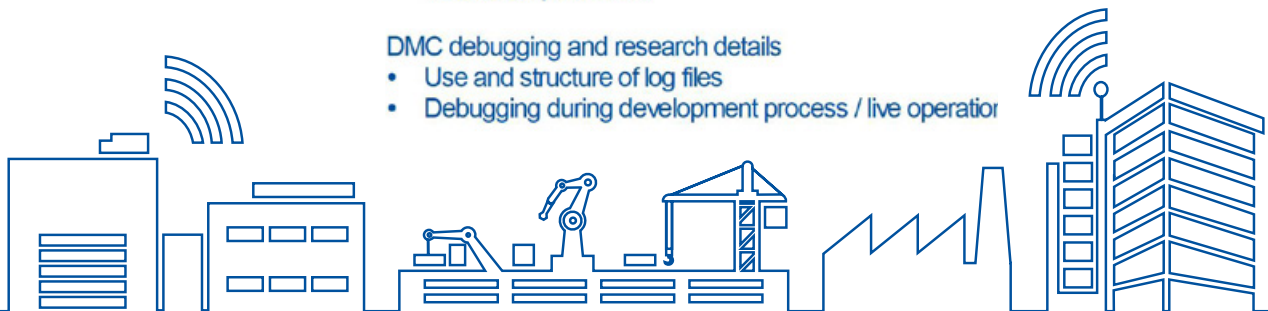


Practical Application Training HYDRA Dynamic Manufacturing Control

Booking Code	BAT-DMC
Duration	4 Days

Digital process modeling with HYDRA

Target group	HYDRA users involved in the implementation of Dynamic Manufacturing Control (DMC), e.g. in the assembly or the sequence production. The course also addresses process designers, technicians, engineers and developers involved in the processes.
Course objectives	Participants are familiar with HYDRA DMC idea and approach. They are able to classify and digitize the own requirements on implementation with DMC.
Requirement	Basic Application Training HYDRA Manufacturing Processes (BAT-MPR) Basic knowledge of HYDRA applications Basic knowledge of C# and .net Training in English.
Contents	<p>Structure and process know-how – what's the typical DMC environment?</p> <ul style="list-style-type: none"> - Overview, content and structure of HYDRA-DMC - Components and system architecture, objects - Introduction of process modeling and process design - Brief overview: engineering process. - Overview of documentation and function packages DMC - Approach how to create a requirements specification DMC <p>DMC Process Modeling</p> <ul style="list-style-type: none"> - ERP interfaces (orders/material) - GUI display - Collection of order times / personnel times. - Identification of personnel - Machine-related functions - Collection of process data - Transfer of process specifications - Traceability / one piece flow - Process interlocking - Real-time data acquisition - Offline capability <p>Create a sample process using the DMC Process Modeler</p> <ul style="list-style-type: none"> • How to use the DMC Implementation Guide • How to use configuration files • Installation procedure <p>DMC debugging and research details</p> <ul style="list-style-type: none"> • Use and structure of log files • Debugging during development process / live operator

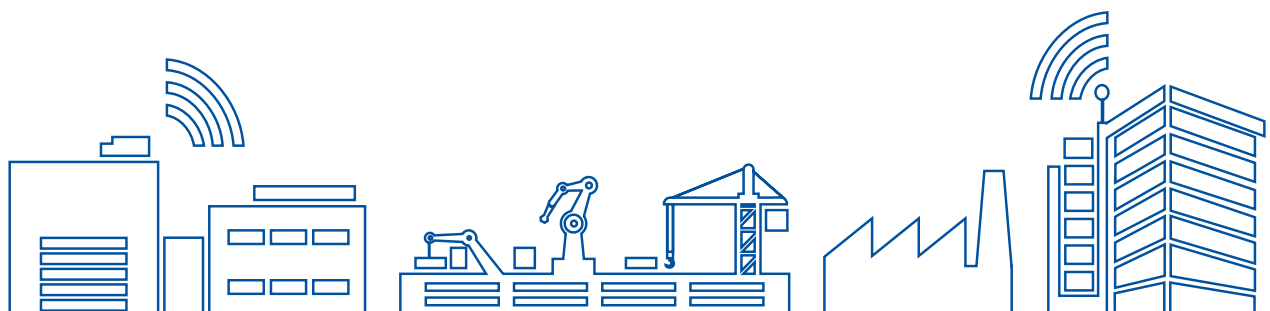


Practical Application Training HYDRA-FMEA

Booking Code	PAT-FMEA
Duration	1 Day

Detect and avoid failures at an early stage with HYDRA-FMEA

Target group	HYDRA users: QM staff, persons responsible for FMEA, FMEA team members.
Course objectives	You know how HYDRA FMEA (Failure Mode and Effects Analysis) generally works and can conduct an FMEA.
Requirement	You need not attend other training courses.
Contents	<p>General explanations: what is an FMEA (Failure Mode and Effects Analysis)?</p> <p>Create a new FMEA</p> <p>Define objectives</p> <p>Assemble the FMEA team</p> <p>Conduct the FMEA</p> <ul style="list-style-type: none">• Create system components• Create functions• Create failures• Set up a failure network• Analysis of measures <p>Create an assessment catalog</p>



Practical Application Training CAQ Form Design

Booking Code	PAT-FVE
Duration	1 Day

Creating forms with HYDRA Quality Management

Target group	Employees who change and create forms in quality management.
Course objectives	You learn how to change the design and contents of existing Word forms and how to create new forms based on existing ones. You are in the position to manage existing and new forms, e.g. enable and disable forms, change print options.
Requirement	Knowledge of the respective HYDRA module where you want to change existing forms or create new forms. You should be aware of the data you want to integrate in the form. Basic knowledge of XML data structures is required.
Contents	<p>Management</p> <ul style="list-style-type: none">- Enable/disable forms- Change display position, name and description- Change print destination settings and print options <p>Edit existing forms</p> <ul style="list-style-type: none">- Introduction to form design using XML data files- Change contents of headers and footers (e.g. integrate company logos)- Change table contents <p>Create new forms</p> <ul style="list-style-type: none">- Copy existing forms to create new ones- Work with draft versions- Design headers, footers and table panes using XML data files <p>Exercises</p>



Practical Application Training HYDRA Premium & Incentive Wages

Booking Code	PAT-LLE
Duration	1 Day

Digitize your performance-related payroll with HYDRA-LLE

Target group	Key users and administrators of HYDRA Premium & Incentive Wages (LLE).
Course objectives	You gain insights into the larger context of HYDRA Premium & Incentive Wages (LLE). You can configure HYDRA-LLE and understand how the system calculates results and displays data in evaluations/reports. You can maintain and manage the LLE system and brief other employees..
Requirement	You do not have to complete other training courses.
Contents	<p>Basic data of Premium & Incentive Wages (LLE)</p> <ul style="list-style-type: none">- Relevant postings and master data from Shop Floor Data Collection (BDE/MDE)- Relevant data from Time & Attendance (PZE)- Relevant data and master data of Premium & Incentive Wages (LLE) <p>Settlement of individual persons</p> <ul style="list-style-type: none">- Piecework- Time wage, indirect labor, etc. <p>Group allocation</p> <ul style="list-style-type: none">- Identify group membership- Different bonus types <p>Editing functions and evaluations/reports</p> <ul style="list-style-type: none">- Editing and correction options- Evaluations and lists- PZE/BDE comparison <p>Interfaces to third-party systems</p> <ul style="list-style-type: none">- ERP system- Payroll <p>Exercises</p>



Practical Application Training CAQ Measurement Data Interface

Booking Code	PAT-MDI
Duration	1 Day

Connect measuring equipment with HYDRA-MDI

Target group	Employees responsible for the connection of various measuring and test systems using the measurement data interface (MDI).
Course objectives	You learn how to configure different MDIs to design the data collection process including the inspection plan configuration and the creation of master data.
Requirement	Basic Application Training HYDRA Quality Management (BAT-QMG) Basic technical knowledge is required, e.g. the USB-COM-Port configuration.
Contents	<p>Master data</p> <ul style="list-style-type: none">- Create MDI configurations in quality management master data.- Assign test equipment / test equipment groups to MDI configurations <p>Administration</p> <ul style="list-style-type: none">- Install MDI servers- Introduction to the configuration options of different MDI servers (e.g. MDI-Steinwald, MDI-Serial, MDI-Measured Value File, MDI-Measured Value List)- Real connection of measuring equipment via an interface box- Process measured value files using MDI servers- Collect measured values in HYDRA/AIP from MDI servers <p>Exercises</p>



Basic Application Training MES Cockpit

Booking Code	BAT-MSC
Duration	1 Day

Develop KPI systems with MES Cockpit

Target group	MES Cockpit users and administrators and employees implementing the MES Cockpit.
Course objectives	You become familiar with MES Cockpit and its evaluations/reports.
Requirement	You do not have to complete other training courses.
Contents	<p>How to operate and use the MES Cockpit</p> <ul style="list-style-type: none">- MES Cockpit evaluation functions- Evaluations for the objects workplace, order and operation- Evaluation of status information applicable to all systems and to specific systems <p>MES Cockpit administration</p> <ul style="list-style-type: none">- User configuration- Management of KPIs- Management of target values- Management of authorizations <p>Exercises</p>



Practical Application Training HYDRA as Quality Management Subsystem

Booking Code	PAT-QMS
Duration	1 Day

Use HYDRA as SAP-QM subsystem

Target group	Employees involved in the implementation and configuration of HYDRA as SAP-QM subsystem.
Course objectives	You become familiar with the functions of the HYDRA product group Shop Floor Data Collection (BDE) and learn how to use these functions.
Requirement	Basic knowledge of the QM-IDI interface used with HYDRA. Knowledge of measurement recording
Contents	Master data <ul style="list-style-type: none">- Contents of QMS catalogs (transferred via QM-IDI) Transaction data <ul style="list-style-type: none">- Inspection requirement / inspection batch- Inspection orders / inspection operations- Inspection points- Characteristics Measurement recording <ul style="list-style-type: none">- Options of generating inspection points- Assignment of measured values, attributive decisions based on specified dialogs- Control charts, histograms
Note	This course does not include exercises. HYDRA functions are presented by means of a demo version.



Practical Application Training HYDRA Complaint Management

Booking Code	PAT-REK
Duration	1 Day

Automate complaint processes with HYDRA-REK

Target group	Employees involved in complaint management.
Course objectives	You get to know the functions of the HYDRA complaint management and the respective configuration options.
Requirement	Basic Application Training HYDRA Quality Management (BAT-QMG)
Contents	<p>Master data maintenance</p> <ul style="list-style-type: none">- Create and/or use the catalog of failures and measures (failure type, location, cause, measure, etc.)- Create cost types- Define companies, departments, responsible parties, etc.- Define complaint workflows <p>Complaints</p> <ul style="list-style-type: none">- Create complaint header data- Define complaint details- Assign measures, costs and documents- Activate workflow steps- Failure analysis <p>Overviews and evaluations/reports</p> <ul style="list-style-type: none">- Main failure modes- Costs- Complaint header / complaint details- Track and edit measures- Reporting, e.g. generate an 8D report <p>Exercises</p>



Practical Application Training HYDRA Access Control

Booking Code	PAT-ZKS
Duration	1 Day

Protect buildings and systems with HYDRA-ZKS

Target group	Employees who implement HYDRA as an access control system or manage access authorizations.
Course objectives	You become familiar with the HYDRA configuration options to create and assign access profiles. You learn how to use lists to check access authorizations and to display accesses and access attempts.
Requirement	You do not have to complete other training courses.
Contents	<p>Basic ZKS configuration</p> <ul style="list-style-type: none">- Create access groups- Configure terminals and accesses- Define access time models and opening hours <p>Master data</p> <ul style="list-style-type: none">- Create and edit badges- Plan public holidays <p>Working with access profiles</p> <ul style="list-style-type: none">- Create access profiles- Assign access authorizations- Assign access profiles to badges- Different data views <p>Evaluations and lists</p> <ul style="list-style-type: none">- List of access authorizations for each badge- Display the authorized persons for a specific access group- Display accesses and access attempts <p>Exercises</p> <ul style="list-style-type: none">-

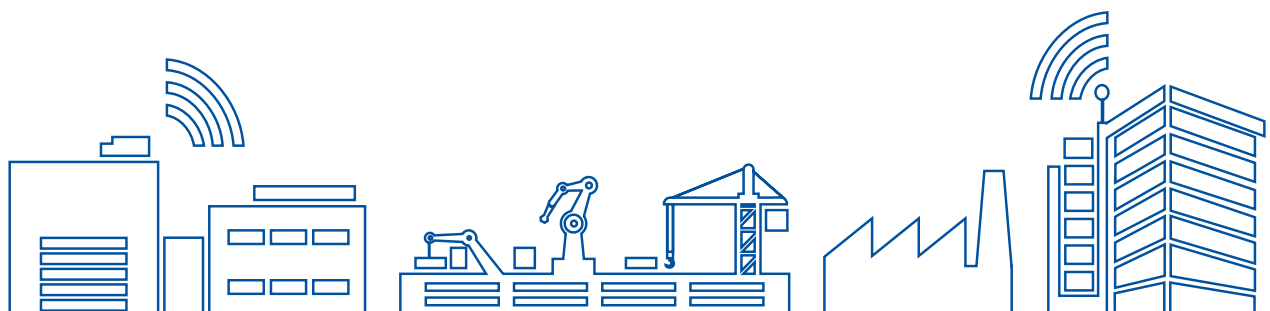


Customization Training HYDRA Dynamic Manufacturing Control

Booking Code	PCT-DMC
Duration	2 Days

Develop process-specific components for HYDRA-DMC

Target group	Process owners and developers who introduce DMC and develop/integrate modifications in the DMC environment and design further components.
Course objectives	You learn how to customize HYDRA-DMC and how to model and develop your own components for HYDRA-DMC.
Requirement	Basic Application Training HYDRA Dynamic Manufacturing Control (BAT-DMC) Extended Application Training HYDRA Dynamic Manufacturing Control (EAT-DMC) Basic knowledge of HYDRA applications Good knowledge of C# and .NET
Contents	DMC configuration, factory model and templates Dynamic Process Interpreter Component model and manufacturing instructions for data modeling GUI development framework and GUI components Use of GUI template library Instantiation – Workpiece generator Use of driver development framework and driver template library Creation of drivers / integration of new components Sequence modeling framework



Practical Customization Training MOC Data Presentation

Booking Code	PCT-MDP
Duration	3 Days

Win individuality – Design and create applications yourself

Target group	Personnel responsible for the HYDRA rollout in production, technicians and employees that work with machine related overviews or developers, that create evaluations and overviews on their own.
Course objectives	Training to impart customization knowledge for users and developers who would like to customize their own applications and reports in the MES Operation Center (MOC) in order to visualize data of existing data sources or who would like to change or extend existing applications.
Requirement	Basic Application Training HYDRA Manufacturing Processes (BAT-MPR) Application knowledge about HYDRA and MES Operation Center Basic knowledge about charts, Pivot tables, and print views
Contents	Create custom applications to display data Use existing MOC data sources Display data in table views, charts, pivot tables or print reports Integrate customized applications in the MOC menu Connect applications with the toolbar Change icons and define customized label texts Customize existing applications System-wide deployment Best practice examples and exercises



Practical Customization Training MES Cockpit

Booking Code	PCT-MSC
Duration	2 Days

Develop or customize MES Cockpit functions

Target group	MES Cockpit users who would like to create their own objects or change existing objects.
Course objectives	You become familiar with the structures and larger context of MES Cockpit 3.1. You learn how to customize the performance analysis, production monitoring and shop floor information in order to use and evaluate additional data.
Requirement	Basic Application Training MES Cockpit (BAT-MSC)
Contents	<p>Introduction to the technical basics of MES Cockpit</p> <ul style="list-style-type: none">- MES Cockpit structure- MES Cockpit terminology <p>Introduction to available editing options</p> <ul style="list-style-type: none">- Editing options provided by the performance analysis, production monitoring and shop floor information- Edit existing objects- Define new objects- Advanced data supply options for data export <p>Exercises</p>



Practical Customizing Training Template Editor

Booking Code	PCT-SMT
Duration	1 Day
Target group	Training for HYDRA users who intend to create individual hall/floor layouts or the like in the HYDRA Shop Floor Monitor.
Course objectives	The participants are capable of creating individual templates for use in the Shop Floor Monitor and/or adapting existing templates using the Template Editor
Requirement	Basic practical knowledge of HYDRA MDE applications
Contents	Instruction in the Template Editor and development of examples for editing and creating templates. Practical exercises



Practical Customization Training HYDRA Workflow

Booking Code	PCT-WFM
Duration	2 Days

Configure, apply and exploit HYDRA Workflow Management

Target group	HYDRA users responsible for increasing productivity, process automation and quality management.
Course objectives	You become familiar with Workflow Management and know how to use it.
Requirement	Basic Application Training HYDRA Manufacturing (BAT-MF)
Contents	<p>Creating and editing:</p> <ul style="list-style-type: none">- Change existing workflows- Create new workflows- Becoming familiar with the configuration options supported by workflows (e.g. sending e-mails and generating tasks for defined users/user groups)- Configure the MES Operation Center- Automatic creation of documents for defined workflows <p>Exercises</p>





Certification



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Certification

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