

Training Center Sales

Seminar program / training profiles:

- TCG Product Introduction
- Power Plant Engineering / Layout for Mannheim Products
- Life Cycle Cost and Value Proposition
- Electrical Engineering

Title	TCG Product Introduction
Overview	Mannheim Engine and Genset Features, USPs, Competition Overview
Learning Objectives	<ul style="list-style-type: none"> • Understand the TCG product offerings <ul style="list-style-type: none"> ○ Engine and genset features ○ USPs ○ Competition • Understand applications and markets • Understand how products and solutions fit to your market
Prerequisites	<ul style="list-style-type: none"> • Basic understanding of gas engine workings • Basic understanding of gas genset applications • Basic understanding of gas applications / markets
Out of Scope	<ul style="list-style-type: none"> • Power plant engineering details • Detailed control system training (TEM-Evo) • Grid connection details
Contents	<ul style="list-style-type: none"> • TCG Products Introduction • TCG Product Fundamentals • TCG 2016 • TCG 2020, TCG 2020 K • TCG 2032 • Applications / Markets

Title	Power Plant Engineering / Layout for Mannheim Products
Overview	Learn about the applications of Mannheim sourced products and how to layout the plants according to Mannheim design rules
Learning Objectives	<ul style="list-style-type: none"> • Understanding the physical principles of cogeneration of heat and power • Understanding of the layout and the design of power and CHP plants • Familiarization with the range of power and CHP plant applications (powerplant, CHP, container, biogas etc.) • Familiarization with Mannheim plant design rules and specifications (e.g. technical circulars) • Knowing of the components of a power plant • Familiarization with Mannheim plant documentation (e.g. PID, CAD drawings, POWER data sheet)
Prerequisites	<ul style="list-style-type: none"> • Understanding of gas engine workings • Basic knowledge about Mannheim sourced products • Basic understanding of thermodynamics, heat transfer and fluid dynamics • Basic understanding of piping and instrumentation diagrams and symbols • Basic understanding of power plant components
Out of Scope	<ul style="list-style-type: none"> • Engine design and details • Generator details • Detailed TEM description • Grid connection details
Contents	<ul style="list-style-type: none"> • Cogeneration of Heat and Power • Technical Fundamentals • Plant Layouts • System Components • Technical Documentation • Gas Treatment • Segment Presentations • Applications and Markets

Title	Electrical Engineering
Overview	Learn TEM-Evo functionality and scope of supply, switchgear system, operation modes, SCADA, generators and how to select the best options
Learning Objectives	<ul style="list-style-type: none"> • Understand the role and scope of TEM-Evo & switchgear functionality and options • Select the correct options for a customer project • Use the options in the sales cycle • Understand the different operation philosophies • Know where to find detailed information and support
Prerequisites	<ul style="list-style-type: none"> • Mannheim sourced engine fundamentals • Training 'Power Plant Engineering – Layout for Mannheim Sourced Products' • Basic electrical engineering knowledge
Out of Scope	<ul style="list-style-type: none"> • Power plant layout • Engine design and details • Component details • Control system (EMCP2, EMCP4)
Contents	<ul style="list-style-type: none"> • TEM-Evo • Switchgear System • Sales Tools (Electrical Engineering) • Operation Modes • SCADA • Generator

Title	Life Cycle Cost and Value Proposition
Overview	Learn about life cycle costs and value proposition of power plants and how to sell in a commercial setting
Learning Objectives	<ul style="list-style-type: none"> • Obtain understanding (and clarification) of the concepts and terminology used to discuss and calculate LCC and Value Prop. • Obtain a detailed understanding of Operating Cost. Participants should be able to discuss the various components that make Operating Cost, as well as how each component can affect overall Value Prop. (CSA) • Obtain an understanding on the various service concepts and understand how these affect the Operating Cost calculation and Capacity Factor. • Participants should obtain a rudimentary understanding of the various tools available for the calculation of Operating Costs • Provide Basic Training for the MWM CHP tool • Provide definitive reference list for LCC information sources • Provide participants with the fundamentals needed to draft a Customer Service Agreement (CSA)
Prerequisites	<ul style="list-style-type: none"> • Basic gas engine knowledge and basic understanding of gaseous fueled markets will be needed to understand the concepts • Basic experience in the gaseous fueled markets
Out of Scope	<ul style="list-style-type: none"> • Detailed direction on how to account for fuel contaminants • Detailed Training on how to use specific Operating Cost tools
Contents	<ul style="list-style-type: none"> • Definition and Concepts <ul style="list-style-type: none"> ○ Define Life Cycle Cost (LCC) Analysis ○ Simplified Value Proposition equation ○ Introduce Complex Life Cycle Cost modeling ○ Discuss LCC Limitations ○ Exercises • Owning and Operation Cost <ul style="list-style-type: none"> ○ Review and differentiate the cost components of a Value Proposition ○ Identify Key Owning Costs and their impact on LCC analysis ○ Detailed break down of the Key Operating Cost ○ Discuss Customer Service Agreements (CSA) and benefits ○ Exercises • Life Cycle Cost –Available Tools (Overview) <ul style="list-style-type: none"> ○ Individual Program Review ○ Exercises