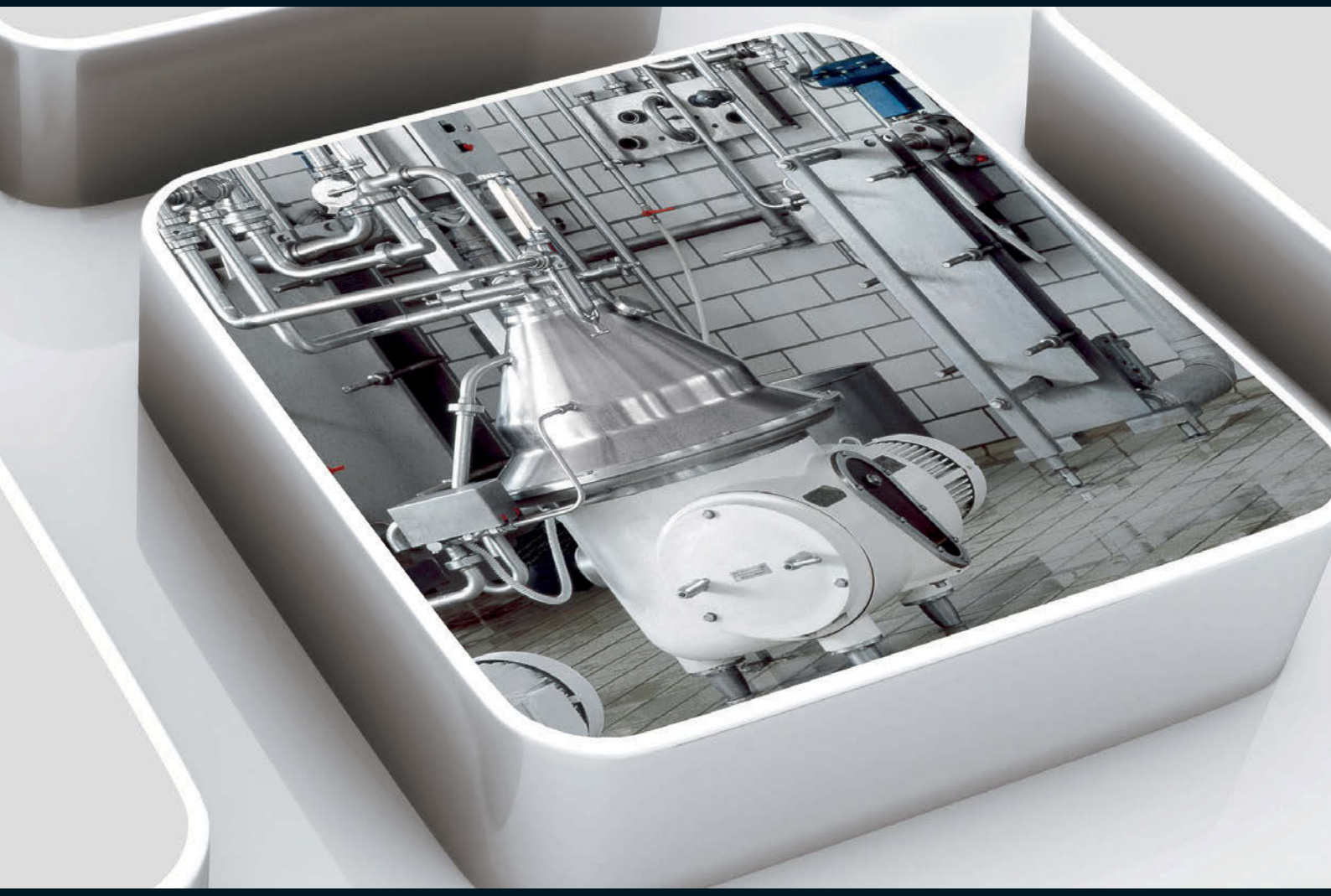
EPLAN

efficient engineering.

EPLAN Preplanning Basic Engineering



PROCESS CONSULTING | ENGINEERING SOFTWARE | IMPLEMENTATION | GLOBAL SUPPORT

FRIEDHELM LOH GROUP

Company

EPLAN Software & Service develops CAE solutions and advises companies on how to optimise their engineering processes. Customers profit from increased efficiency in the product development process through standardised procedures, automated sequences and consistent workflows.

EPLAN provides custom made concepts for the system implementation, installation and smooth integration into the IT/PLM system landscape, based on standard engineering solutions. The service portfolio also covers customising, consulting and training. The development of individual and standardised interfaces for ERP, PDM and PLM ensures data consistency in product development.
Consistent customer orientation, global support and innovative development as well as interface expertise are success factors. EPLAN is part of the Friedhelm Loh Group. This ensures continuity and investment security.

EPLAN Preplanning

Basic Engineering

Process automation from the beginning

EPLAN Preplanning is CAE software for the planning and design of process automation for process-related machinery and plant. Starting from system overviews (P&IDs), system structures, process control points and data acquisition from sensors and actuators, a comprehensive machine and system documentation complements automatic creation of diverse reports.

EPLAN Preplanning supports graphic, structural and device-oriented basic engineering. The integration into the EPLAN Platform enables data transfer in the downstream interdisciplinary detail planning with EPLAN Electric P8 or EPLAN Fluid. You can undertake the first planning activities for process automation technology and in the engineering process early in the EPLAN Platform.

You benefit from:

- Faster engineering processes
- Optimised project quality
- Consistent documentation

EPLAN Platform technology

The EPLAN Platform is the engineering pacesetter: It feeds the EPLAN systems in the I&C, electrical and fluid engineering. It provides the necessary wiring information as a basis for determining optimum installation paths, connection lengths and beam diameter in the switch cabinet, switchgear building and for harness design. In this way the EPLAN Platform brings together various expert systems and data for mechanical and electrical design and integrates perfectly into existing IT infrastructures and engineering processes.*

*The functions and options presented in this brochure always refer to the maximum stage of completion of the product.

Simply ‘hand data on’

The openness and continuity contained in the EPLAN solutions ensures genuine benefits in the day-to-day engineering process.

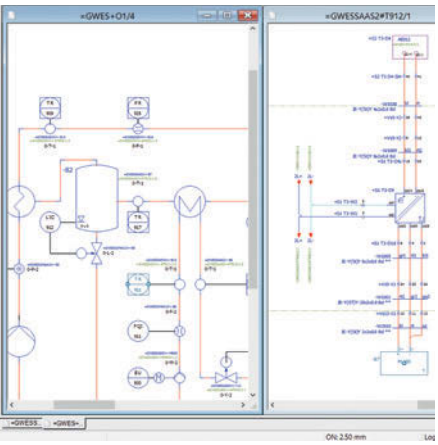
- Example

The data on measurement and consumption points recorded in the PMC configuration can be exchanged with adjacent departments by means of import and export functions. This continuous dialogue ensures data consistency and avoids time-consuming manual data entry.

EPLAN Data Portal

The EPLAN Data Portal is a global web service for high quality device data. Numerous leading component manufacturers provide online access to commercial, technical, process-oriented and corresponding graphics data in standardised EPLAN format. With direct access from the EPLAN Platform, the designer can access an ever-increasing pool of qualified parts data online. This largely puts an end to the time-consuming process of producing parts data manually, reducing configuration time at the same time as increasing the quality of machine and plant documentation.

Interdisciplinary process plant engineering



Tasks in process automation

Increasingly complex tasks already pose an enormous challenge in engineering. The complete management of data from sensors, as well as the increasing degree of automation are just two examples.

This requires a change in working practice. Innovative and flexible engineering systems are a prerequisite that enable cross-disciplinary project processing. EPLAN Preplanning is the planning tool for the realisation of measurement and instrumentation projects in the field of process automation. In basic engineering, the central dialogue in the EPLAN Platform is the preplanning navigator. In this dialogue, the segments of preplanning defined in a project are managed. By using the preplanning macros through the simple “drag & drop” of already existing segments, machine and system structures can be created and edited quickly. Alternatively, it is possible to work in the graphical editor during preplanning.

EPLAN Preplanning provides more flexibility for individual planning tasks. Project engineers can focus on planning tasks and are relieved of common tasks such as data acquisition and matching.

High availability thanks to automation components

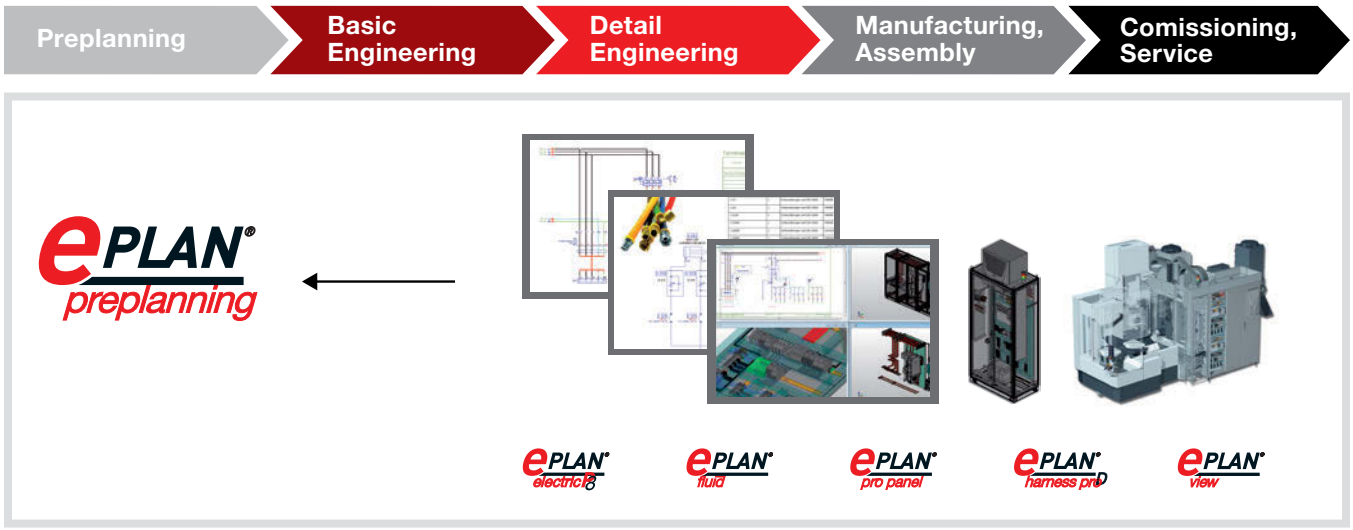
As the basis for a high level of automation, modern process control systems and PLC controllers are indispensable these days in the conceptual design and operation of process plant. High availability, maximum flexibility and ease of operation demand the employment of automation components. Operation and maintenance departments can only benefit if top configuration is secured in engineering and the entire automation engineering is recorded in consistent machine/plant documentation.

Fast and flexible workflow

Introduction to Basic Engineering

As a CAE system for technical preplanning of machinery and plant, the focus of EPLAN Preplanning is in basic engineering. In the early stage of a project, the user can create graphic overviews easily and quickly with EPLAN Preplanning P&ID. Information on components of the process and automation technology can be stored directly in the drawing and in parallel in the project database. For the creation of a plant and machine overview, part drawings can be stored as macros. This provides great flexibility because variants can be assigned with individually defined value sets.

A single macro can contain, for example, a tank, a pump drive or a roller conveyor with different configurations of sensors and actuators. These individual capabilities support the definition of a flexible basis for planning. Already at this early stage of planning, standardisation and reuse provide far-reaching benefits.



EPLAN Preplanning

Interdisciplinary

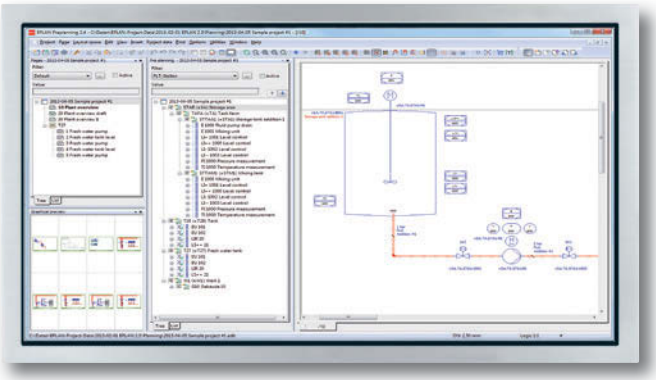
Transition between basic and detail engineering

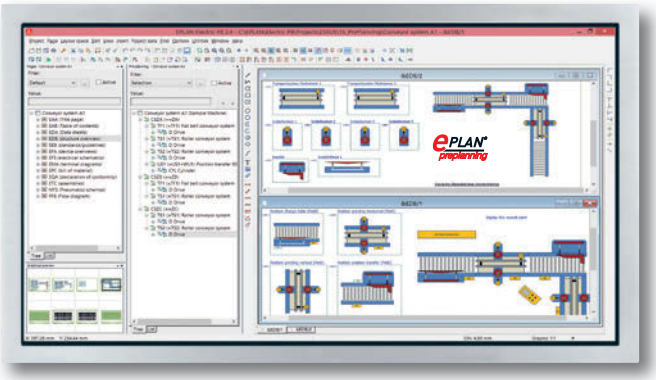
The further planning of the entire automation system progresses on the basis of the stored machine and plant data. The administration and documentation of a functional machine/plant overview and all the associated device specifications including the assembly instructions round off the basic planning.

In the subsequent detailed planning, the EPLAN Platform offers the possibility of managing the PLC and bus components in logical structures and topologies besides documentation, fluid and electrical engineering. The bidirectional exchange of this data with the guiding PCS/PLC/bus systems (hardware configuration and software development) makes end-to-end engineering processes possible. Routine tasks such as the harmonisation of information between the disciplines and updating changes in the documentation are handled by the EPLAN Platform technology.


reports
I&C engineering
implementation
engineering process
time savings
time to market
process automation
training
support
engineering process
EPLAN Platform
product engineering
Basic Engineering
plant documentation
implementing
high availability
integration
loop engineering
sensor technology
actuator engineering
electrical engineering
PLC control
engineering integration
production
planning
P&ID engineering
assembly
EPLAN Preplaning
training
PDM Interface
ERP Interface
EPLAN P&ID
multi user management
electrical design
flexibility
PCT technology
process automation

Individual solutions





EPLAN Preplanning P&ID

Solution for creating graphic overviews (P&ID) with process control points definition and management.

- P&ID creation incl. process control points management and macro-technology
- Plant structures in a clear tree structure
- Importing process control points lists from Excel®
- Reports for process control points

EPLAN Preplanning Professional

Basic engineering in process automation and machine automation.

- Machinery and equipment overviews as a graphical approach to planning
- P&ID creation incl. process control points, management and macro-technology
- Machine and plant structures in a clear tree structure
- Configurable planning objects and structural segments
- Importing process control points and component lists from Excel®
- Free properties for individual configuration
- Segment template as a basis for standardisation
- Extensive reports for all project data

The flexible system configuration allows the adjustment to individual workflow requirements.

EPLAN Preplanning

Your benefits in focus

See for yourself

- Versatile – freely selectable workflow in instrumentation and control engineering
- Modular – for custom system solutions and end-to-end machine/plant documentation
- Interdisciplinary – P&ID and I&C documentation from start to finish
- Automatic – custom project documentation can be derived from the planning data
- Global – translation function based on a translations database
- Consistency – instrumentation and control technology as an integral part of the project documentation

To sum up:
Comprehensive documentation of the automation of a process plant is generated from a uniform, central project data management – all project participants always have the most up-to-date information. Subsequent modifications from the P&ID are automatically copied across to the plant documents. Time-consuming updating is unnecessary and the quality is enhanced.

EPLAN® preplanning

EPLAN

efficient engineering.

- Process consulting
- Engineering software
- Implementation
- Global support

EPLAN Software & Service
EPLAN Competence Centre · Rittal Limited · Braithwell Way ·
Hellaby Industrial Estate · Hellaby · Rotherham · South Yorkshire · S66 8QY
Phone +44(0)1709 704100 · Fax +44(0)1709 730285
Email: info@eplan.co.uk · www.eplan.co.uk

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