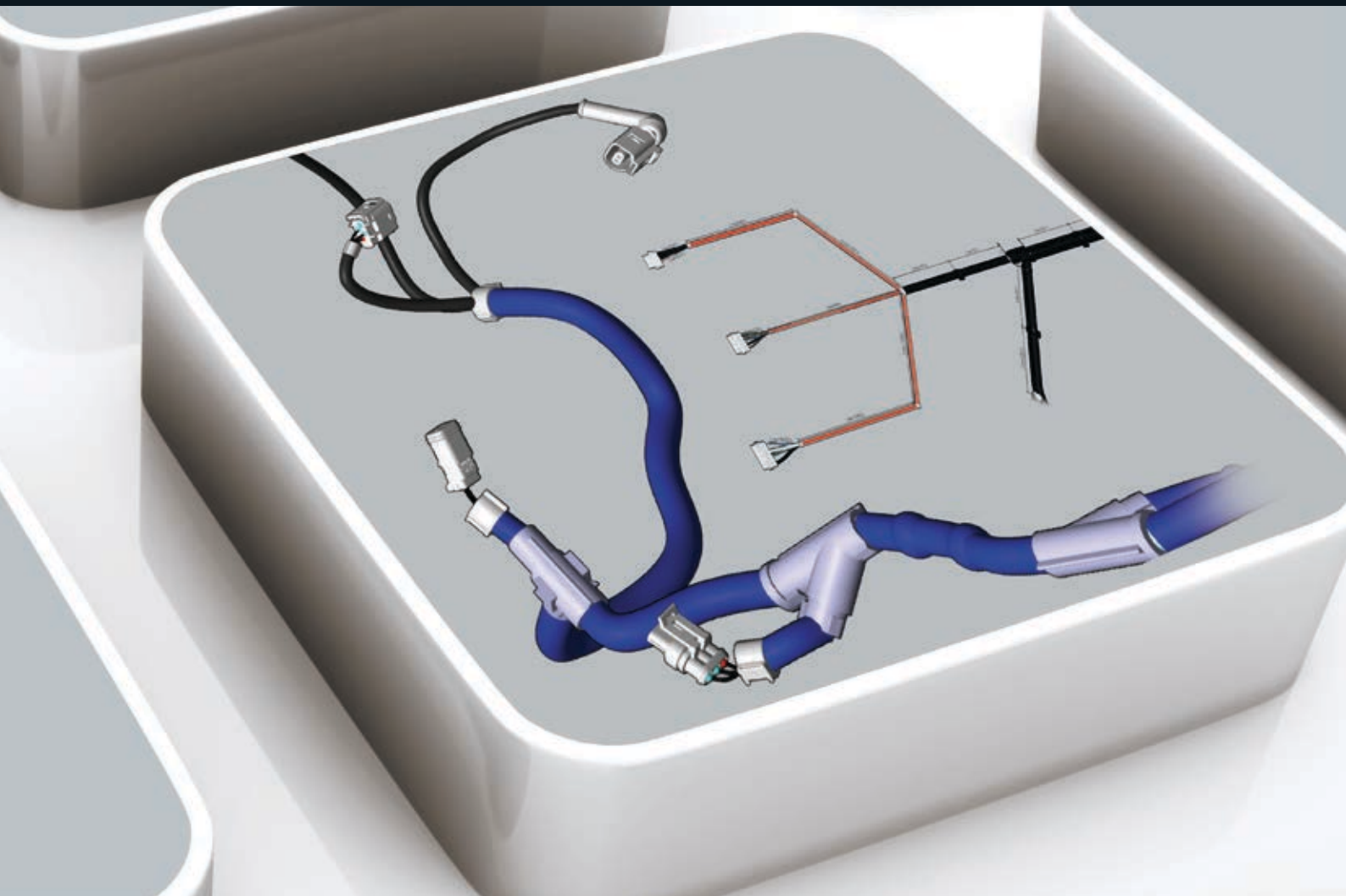


EPLAN

efficient engineering.

➤ EPLAN Harness proD 3D/2D wire harness 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 and interface expertise are success factors. EPLAN is part of Rittal Software Systems which is part of the Friedhelm Loh Group. This ensures continuity and investment security.

EPLAN Harness proD

Wire harness engineering in 3D/2D

EPLAN Harness proD

EPLAN Harness proD is a technologically leading solution for the efficient design and documentation of cables and wire harnesses in 3D/2D. The key challenges with wire harness engineering are the combination of mechanics and electronics, as well as ensuring correct and consistent data. Insufficient communication and missing data exchange between the two disciplines lead to expensive and time-consuming errors, such as lack of space when laying cables, multiple iteration steps when designing and manufacturing, as well as incorrect length calculations.

With EPLAN Harness proD you intelligently connect disciplines and increase transparency and productivity. Ease of use, automated work processes, correct manufacturing documents and high reusability are strengths of the system. In addition, the wire harness design is not dependent on the availability of a mechanical prototype.

Seamless integration

Thanks to the openness of the system, the transfer of mechanical information from multiple MCAD systems and connection information from ECAD systems is quick and easy. The compatibility and flexibility of EPLAN Harness proD enables seamless integration into PDM landscapes. The EPLAN Platform, through which all EPLAN solutions are interconnected, is the basis for your interdisciplinary engineering.

EPLAN Platform technology

The EPLAN Platform is the engineering pacesetter: It supplies the EPLAN systems for Instrumentation & Control, electrical and fluid power engineering and provides the necessary wiring information as a basis for determining optimal cable routes, connecting lengths and bundle diameters for control cabinet and switchgear engineering, as well as for the wire 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.*



IMPLEMENTATION

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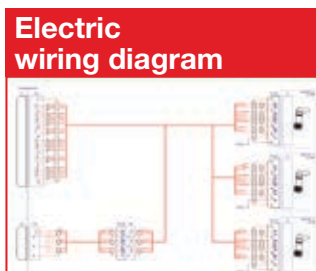
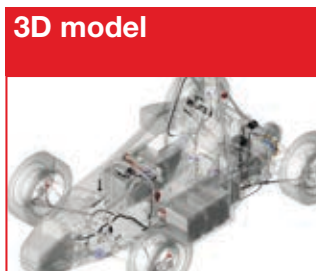
* The features and options presented in this brochure always refer to the maximum configuration of the product.



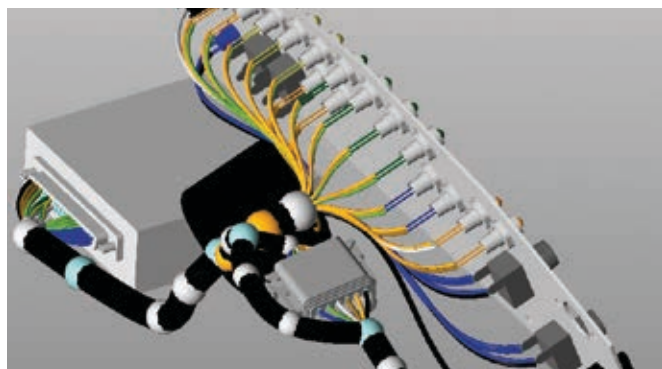
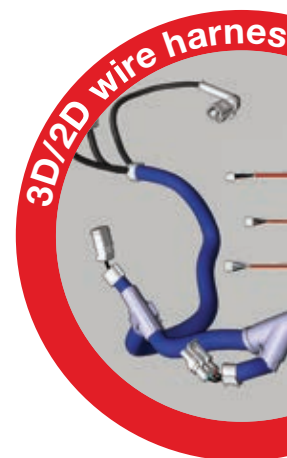
Interdisciplinary design and ease of use

Flexibility and compatibility for perfect IT integration

EPLAN Harness proD blends effortlessly into your IT environment and existing PDM/PLM designs. Interfaces with popular MCAD systems (e.g. NX, CATIA, Autodesk Inventor, SolidWorks, PTC Creo, Solid Edge) and the support of neutral data formats such as IGES, STEP, JT and PARASOLID enable EPLAN Harness proD to seamlessly communicate with the mechanics. The bi-directional exchange is made possible by the export of configured wire harness data to the respective MCAD system – individual cables or wire harnesses, leading elements and connector components are provided for the next process steps. The electrical connection information can also be exchanged in both directions. Wiring and connector lists can be imported directly into EPLAN Harness proD from EPLAN Electric P8, from Microsoft Excel or from TXT and CSV files. Also, additional properties such as crimp contacts, seals, electrical classes, strip length, etc. are all transferred across. The read-back of wire and cable lengths, bundle names and connector components in EPLAN is a further step of the interdisciplinary integration.

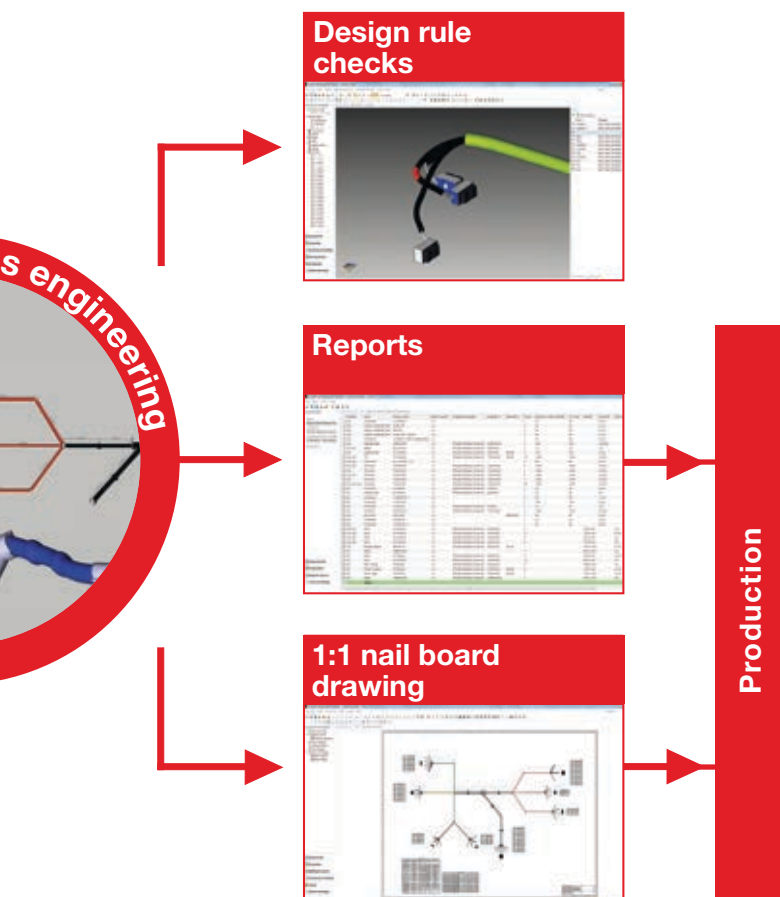


ePLAN
electric8



Simple operation and automatic control

Defining cable paths has never been so easy. The „point and click“ method enables an intuitive definition and adjustment of wire harness paths. With rapid prototyping, you can ensure a quick and easy entry into wire harness engineering. By placing dummy objects such as cables, connectors or leads, and the intuitive definition of the cable routes, a wire harness production drawings can be created quickly. A consistent solution is essential in



Automated production documents – with speed and accuracy

EPLAN Harness proD ensures deep manufacturing integration. 2D nail board drawings as well as control files for wire/cable fabrication machines can be derived automatically. For the structuring, management and production of the manufacturing documentation we provide convenient functionalities – correct and complete files such as bills of material, cable schedules as well as time, cost and weight calculations are guaranteed.

Productive variant management and re-use

EPLAN Harness proD offers comprehensive and clear variant management. Various wire harness options can be managed from a single 150 % design. Within each variant, one or more characteristics (electrical options) can be defined. All necessary manufacturing documents are thereby automatically generated for all variants. Systematic design is achieved through modularisation and re-use. The foundations for this are the „complex entity“ which can be defined as a group of elements or even a complete wire harness. Once defined, the entity can be stored and reused and exchanged with other project participants. For future projects you will benefit from rapid engineering and flawless production.

today's design processes. The EPLAN Harness proD design rule checks guarantee this consistency. They enable the validation of the wire harness by means of various test runs, such as the testing of the minimum bending radii, of the cross-sections (including AWG) and of the wire harness collisions, as well as of the bundle diameters and length restrictions.

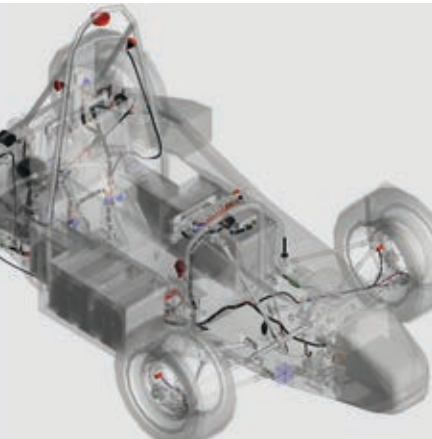
ePLAN®
harness proD

IMPLEMENTATION

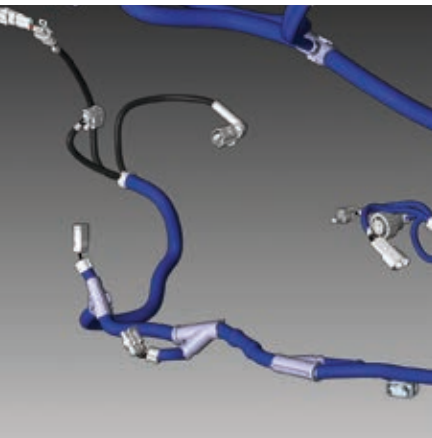
GLOBAL SUPPORT



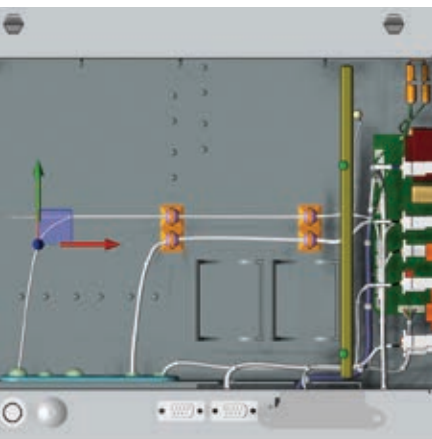
Efficiency in 3D and 2D



3D model



3D wire harness layout



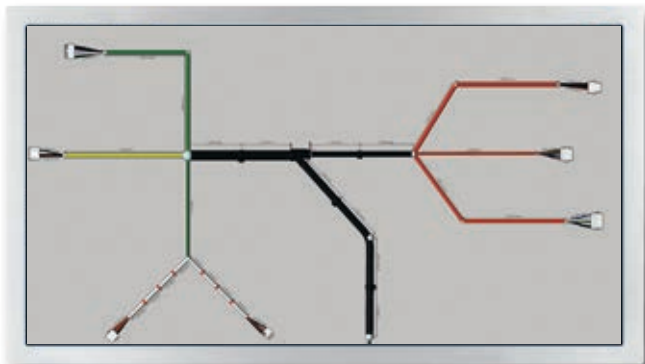
„point and click“ feature

EPLAN Harness proD – a convincing system

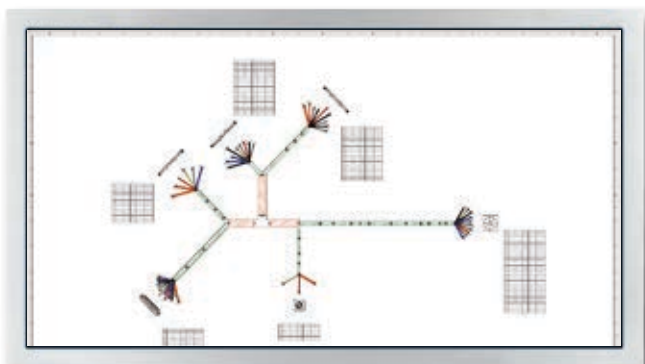
- Compatible – with all major MCAD systems and neutral CAD formats
- Easy-to-use – through rapid prototyping and the „point and click“ method and adoption of connection information
- Automated – manufacturing documents and nail board drawings created by the system
- Looking ahead – depositing proven designs and design alternatives for the future
- Productive – time savings, quality improvement and cost reduction all included
- Flexible – easy integration into your IT environment and PDM/PLM environments
- Constantly updated – bundle diameters and wire length values
- Transparent – traceability (tracking) of all associated wire harness elements such as wires, cable lugs, connectors, etc.
- Test features – control of minimum bending radii, cross sections (also AWG) as well as bundle diameters and length restrictions
- Touch of a button – automatic placing of fitting parts, plugs etc. and automatic creation of delivery/material calculations such as weight calculation, wiring lists and bills of material
- Integrative – deriving of control files for wire/cable fabrication machines for manufacturing integration

EPLAN Harness proD – automated manufacturing documents in 2D

EPLAN Harness proD puts priority on the automated creation of professional, highly detailed manufacturing documents in 2D – from 1:1 scale for nail board use up to handy service documents in the required scale. This is how cable designers can create the necessary documentation in no time at all using customer documents.



2D wire harness layout



Manufacturing document/nail board drawing in 2D

wiring lists
 integration
 engineering process seals
 reports
 time savings
 time to market
 Rapid Prototyping
 point and click
 project process
 EPLAN Harness
 pro2D
 product engineering
 integration
 training support
 multi user management
 PDM landscapes
 virtual prototype
 quality
 documentation
 integration
 standard
 EPLAN Harness
 implementation
 pro3D
 electrical
 engineering
 EPLAN Harness
 proD
 tracking
 engineering
 integration
 crimp contacts
 parts list
 wiring lists
 MCAD ECAD
 Interface
 flexibility
 training
 cable length
 cable installation
 wire harness design
 wire harnesses 3D/2D
 EPLAN Harness proD
 EPLAN Platform
 integration
 pin
 electrical classes
 virtual prototype

IMPLEMENTATION

GLOBAL SUPPORT



EPLAN

efficient engineering.

- Process consulting
- Engineering software
- Implementation
- Global support



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