

Workplace Solutions

Optimising processes in panel building

With complete workplace solutions



Ideally equipped for every work phase

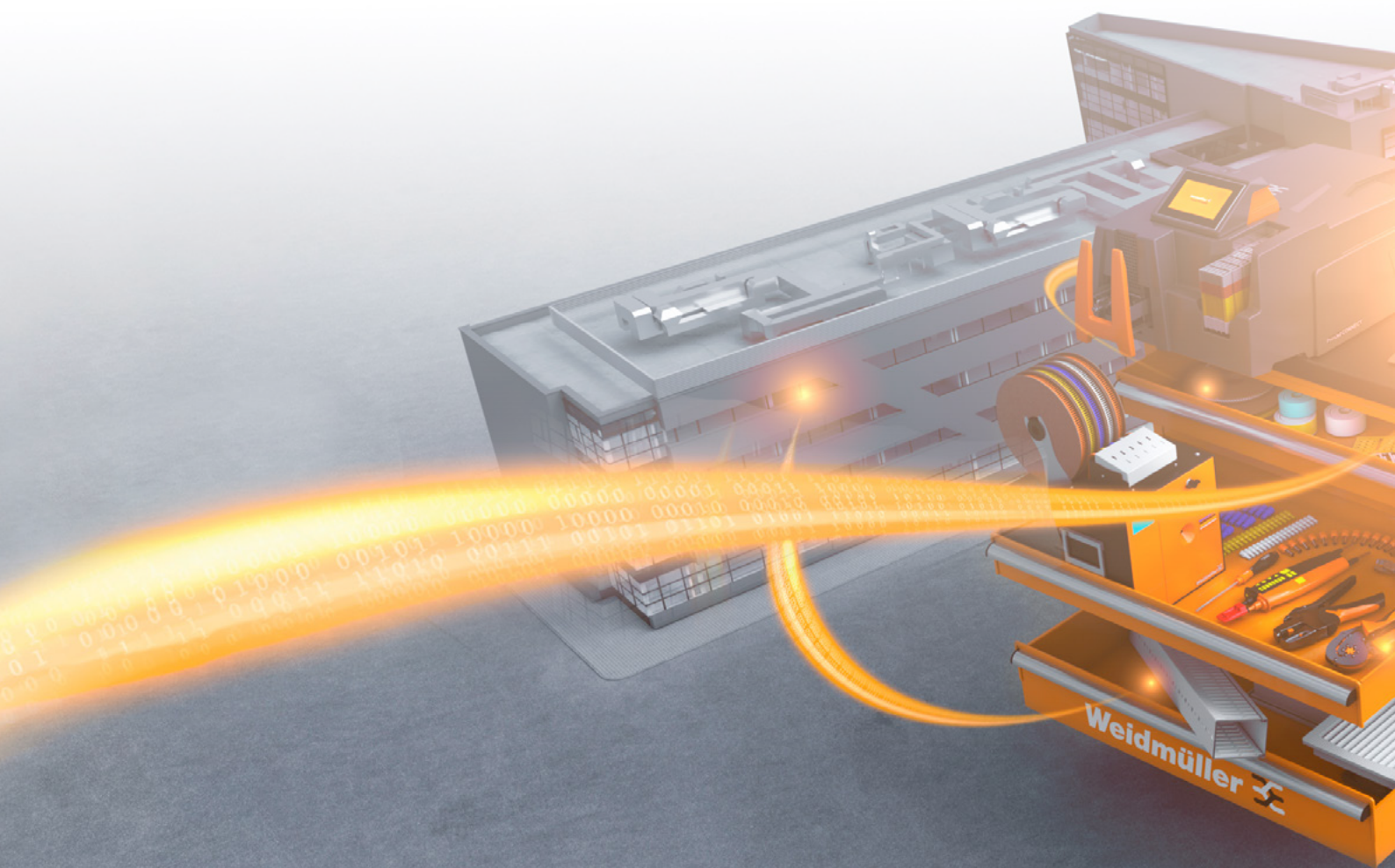
Increase efficiency and save time

The current boom in the sector is opening up new challenges for panel builders. On the one hand, the order books are full, but on the other hand, international competition is increasing, which in turn is leading to increased cost pressure. This dilemma will not be resolved by a single action alone, but rather by the consistent optimisation of the entire panel building process.

With Weidmüller, you have a strong partner by your side to support you in all work phases with perfectly coordinated solutions for your workshop. Based on many years of practical experience in panel building, we offer a comprehensive portfolio to effectively speed up your processes and increase your quality. Take a good look at our tools, markers, printers, software, automated systems and panel infrastructure for all work phases – from planning to installation and finally operation.

Planning

With our software solutions for marking (M-Print® PRO), semi-automated cable assembly (WPC tool) and configuration (WMC), you are perfectly positioned in every project phase. Thanks to interfaces to your CAE system, you benefit from optimum data consistency from planning through to commissioning.



Installation

Tools of certified premium quality, intuitive automatic stripping and crimping machines as a stand-alone or semi-automated solution, as well as a coordinated marking system enable you to save time and ensure safe assembly. At the same time, you minimise sources of error. Our end-to-end range is rounded off by versatile installation materials and infrastructure components for the panel. Besides our professional manual tools, we also offer you sets with an appropriate and efficient combination of tools and coordinating accessories, as well as a complete tool chest that has been developed in line with 5S and lean principles.

Operation

Even after commissioning your panels, the perfect interaction of products and tools from a single source offers you sustainable efficiency gains. Our extensive range of measuring and testing tools provides you with reliable support for troubleshooting. Seamless marking of all panel components as well as digital data consistency simplify and speed up maintenance work. This helps you reduce downtimes and increase the efficiency of your process steps.



Integrated solutions from Weidmüller

Design

The Weidmüller Configurator (WMC) supports you in planning and configuring your panel, such as with assembled terminal strips. You import data sets from your eCAD system through an interface and simply transfer them back after they have been processed in the WMC.

Purchasing

The consistent availability of all article and order numbers also applies to our E-shop and speeds up purchasing and reordering.

Planning

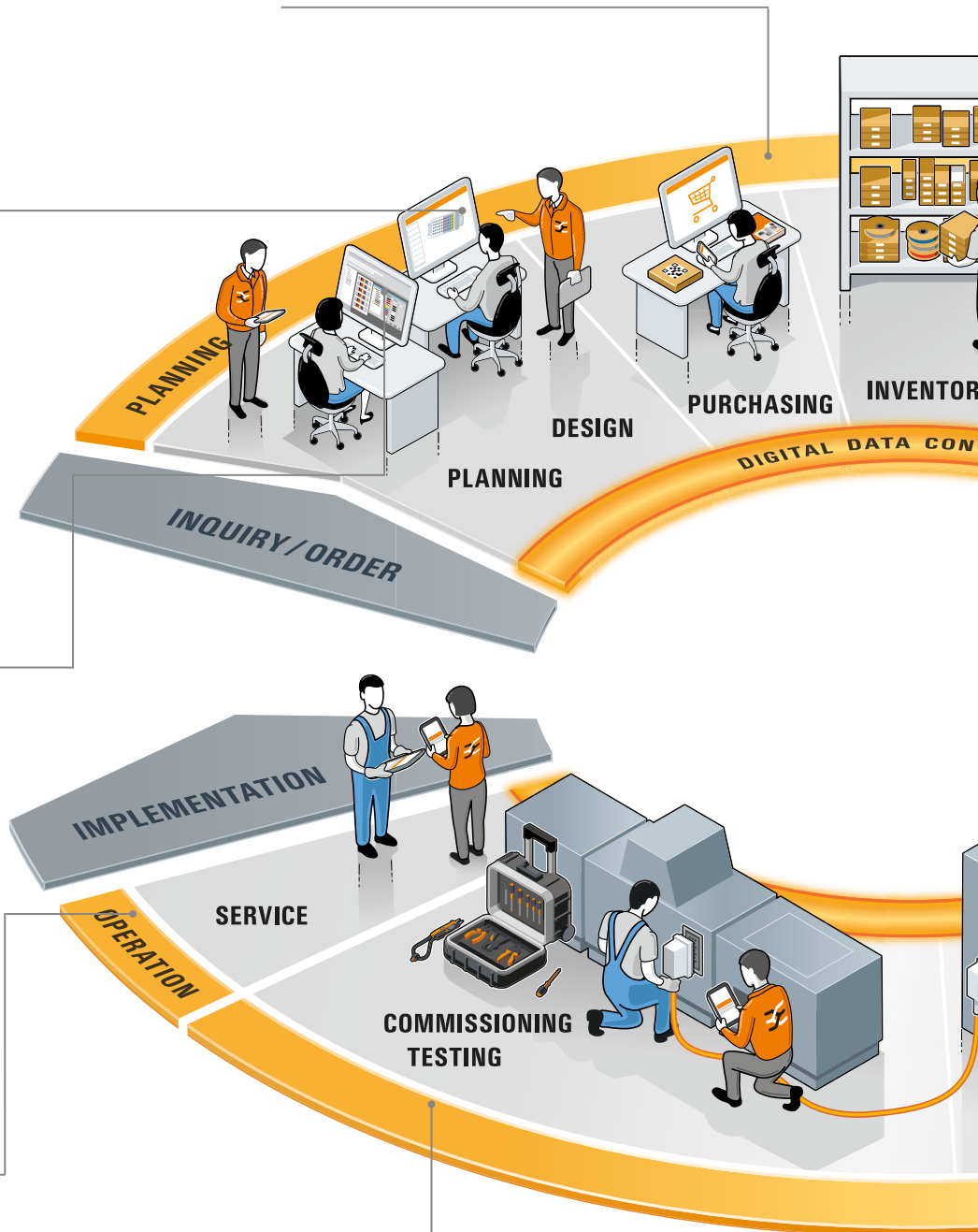
The M-Print® PRO marking software makes it much easier to plan and label markers. With the M-Print® PRO eCAD add-on, you connect your eCAD system with the marking software and perform intelligent automated component marking.

Service

You benefit from the perfect interaction of our integrated portfolio, even during and after the commissioning of your panels. Seamless marking of all panel components as well as digital data consistency simplify and speed up maintenance work. This helps you reduce downtimes and increases the efficiency of the entire application.

Mechanics and electronics in partnership

High-quality and certified measuring and testing tools facilitate the final testing of panels and always deliver reliable measured values.



Warehousing

The markers of our MultiCard system are compatible with components such as terminal blocks, conductors, cables and devices from all manufacturers. Our MultiCard markers are available in almost 700 designs and can be individually printed. This reduces the number of marker variants that you always have to keep in stock.

Mechanical work preparation

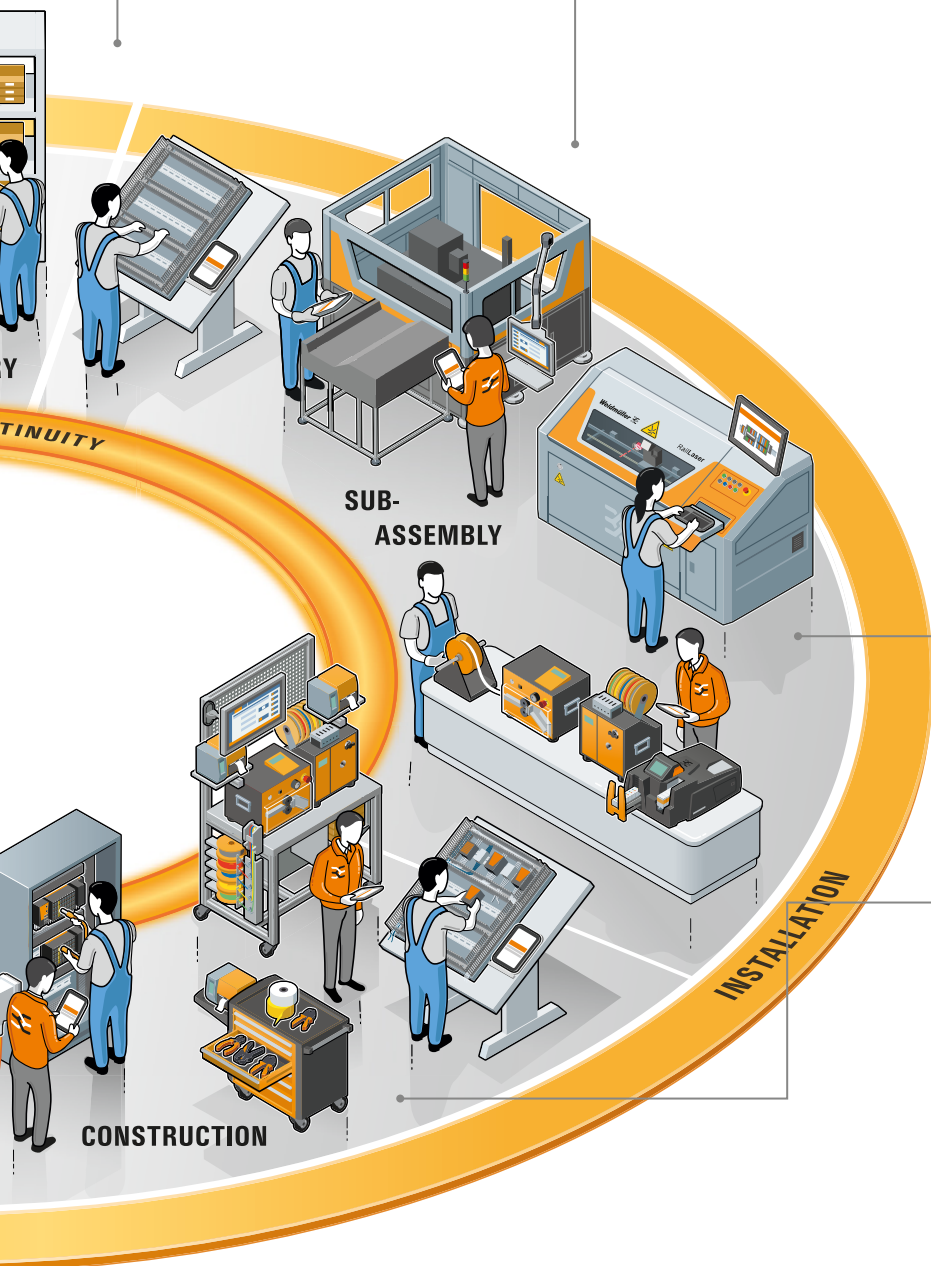
Our comprehensive range supports you in all phases of work preparation, such as with the required panel infrastructure as well as cutting and perforation tools for the mechanical preparation of your panel components.

Electrical work preparation

Our automated systems carry out repetitive tasks for you, such as the cutting to length, stripping and crimping of cables. The marking software M-Print® PRO directly controls printers such as the PrintJet CONNECT or the THM MultiMark and ensures that the right marker is printed for every component and every cable. As stand-alone solutions or as a semiautomated Wire Processing Center (WPC) with your own planning software – our systems offer you maximum application flexibility.

Workshop/design

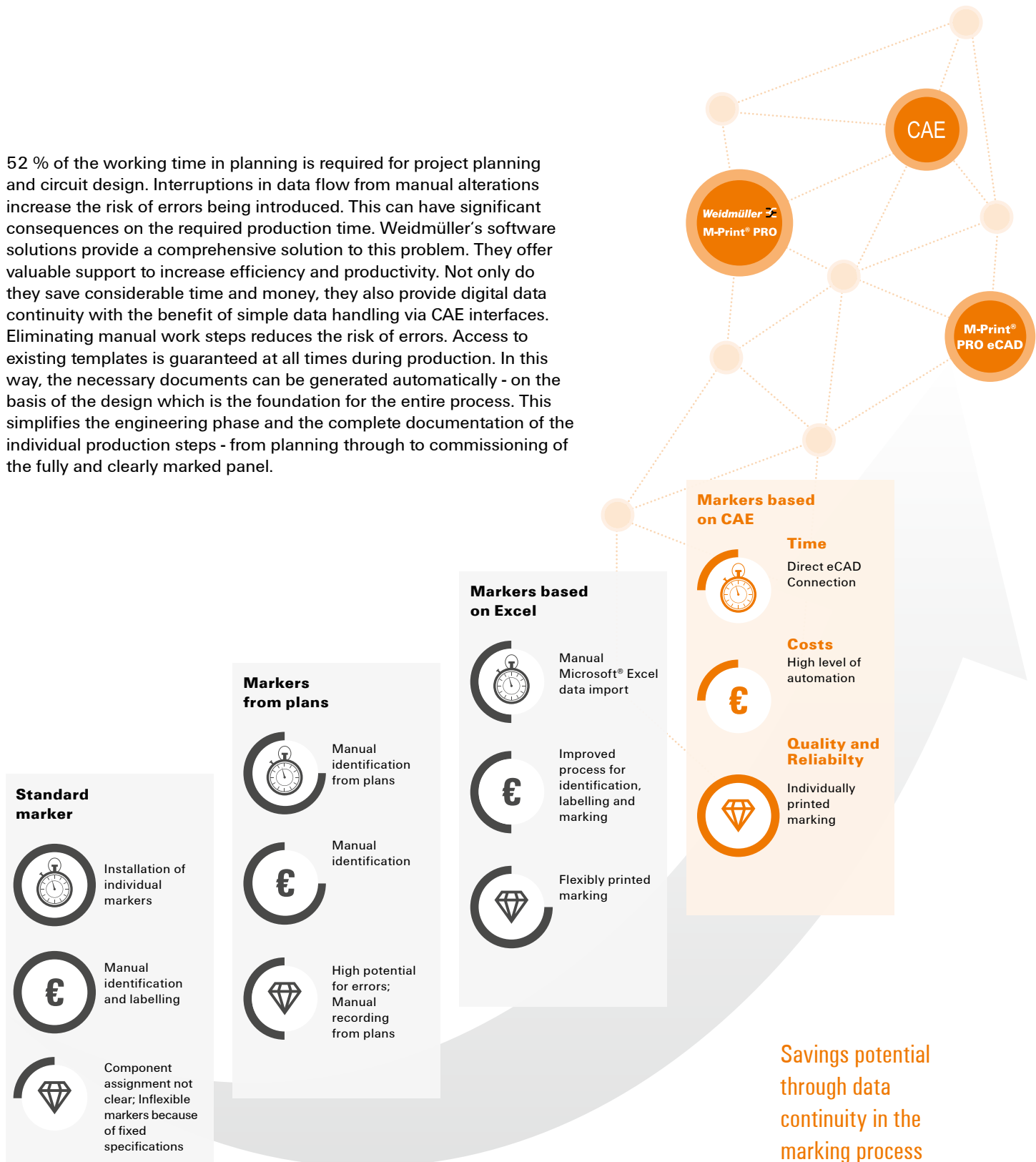
Error sources are reduced in installation and commissioning thanks to the clear and transparent marking of all cables and components. Weidmüller's manual tools for cutting, stripping, crimping, testing and screwing offer you a great deal of efficiency through precision, high quality and ergonomic design. The semi-automated Wire Processing Center (WPC) enables individual process optimisation with significantly increased efficiency.



Simplified engineering and comprehensive documentation

Planning reliability through data consistency

52 % of the working time in planning is required for project planning and circuit design. Interruptions in data flow from manual alterations increase the risk of errors being introduced. This can have significant consequences on the required production time. Weidmüller's software solutions provide a comprehensive solution to this problem. They offer valuable support to increase efficiency and productivity. Not only do they save considerable time and money, they also provide digital data continuity with the benefit of simple data handling via CAE interfaces. Eliminating manual work steps reduces the risk of errors. Access to existing templates is guaranteed at all times during production. In this way, the necessary documents can be generated automatically - on the basis of the design which is the foundation for the entire process. This simplifies the engineering phase and the complete documentation of the individual production steps - from planning through to commissioning of the fully and clearly marked panel.



Savings potential through data continuity in the marking process

Cost reduction up to
60%

Planning

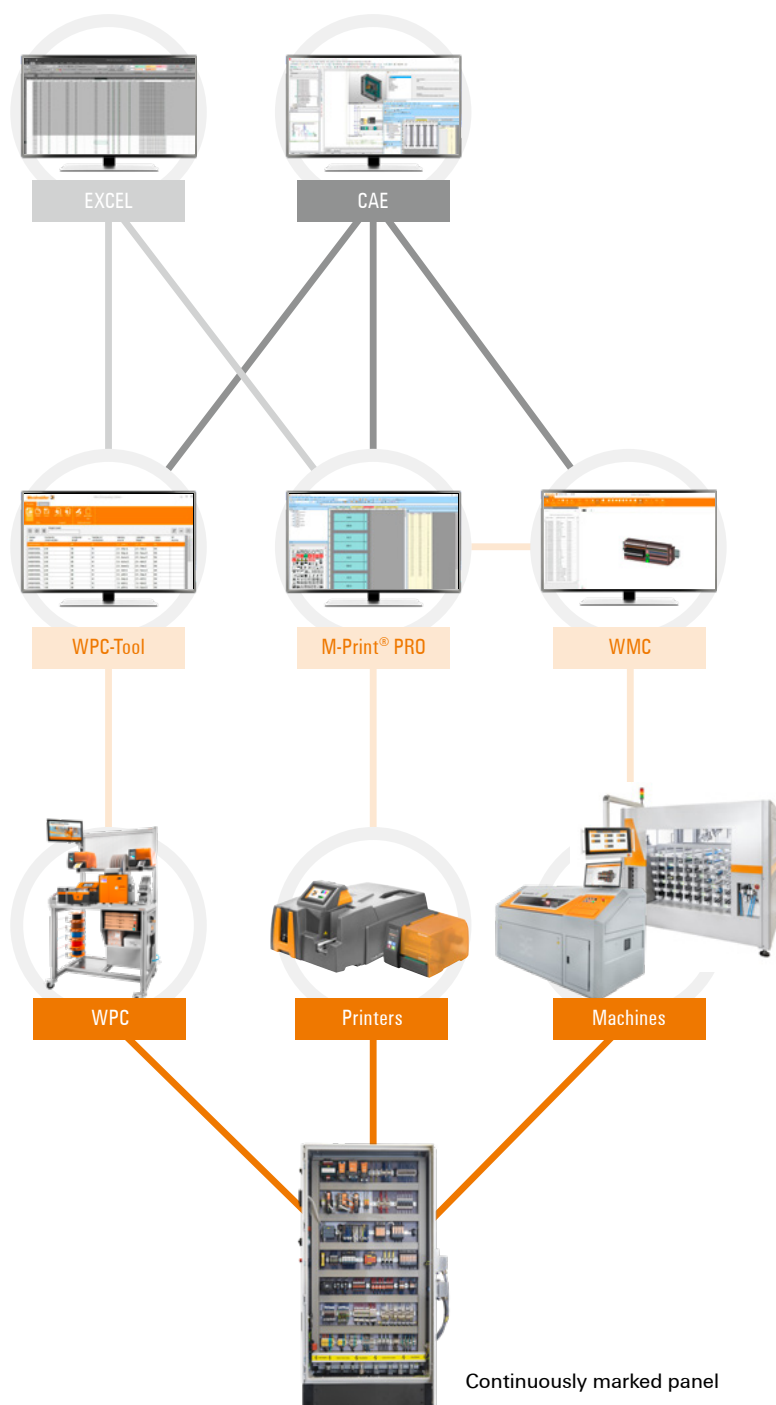
Using M-Print® PRO, planning software WPC tool and Weidmüller Configurator (WMC), data is gathered digitally from the beginning of the process and made available for all subsequent steps. All software tools have CAE interfaces to make data available quickly and easily in the most common engineering environments. From the available item data, e.g. marker types can be clearly assigned to the components and used as standard. Complete terminal strips can be easily configured with the WMC. This optimises the subsequent processes and ensures error-free data allocation.

Installing

By accessing the data created during the planning phase, the error rate is significantly reduced, as no information is lost between the individual work steps and manual processing is not required.

Operating

Thanks to digital data continuity, you receive a clearly marked, correctly assembled and wired control panel. In addition, the comprehensive documentation speeds up commissioning and maintenance work, since each production step can be traced and configurations can also be reproduced easily when required. A decisive advantage in the demanding project business.



Communication. Performance. Quality.

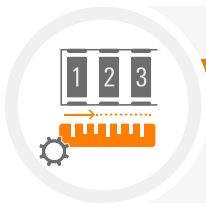
PrintJet CONNECT

The PrintJet CONNECT is the consequent advancement of our well-proven PrintJet series. Designed to meet the modern requirements of industry and control cabinet construction, it combines maximum process and cost efficiency with intelligent networking and complete data consistency. For example, you can use existing data directly for marking – for more efficient work with fewer failures.

The PrintJet CONNECT is part of the Weidmüller marking system consisting of software, markers and printers. It has a particularly durable industrial print head and was designed primarily for the fast marking of medium to large quantities and for continuous operation.

Your advantages at a glance:

- Perfect printing results every time
- Durable and robust markers thanks to thermal fixing
- Fast handling of large volumes
- High level of automation thanks to magazine capacity of 50 MultiCards
- Flexible connection possibilities via LAN, WIFI or USB
- Simple status monitoring on the device
- User-friendly operation thanks to intuitive touch display



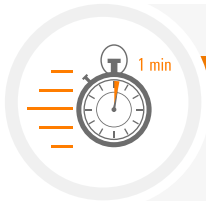
Automatic calibration

Perfect prints without manual adjustment



Remote maintenance

Online support from service technicians



Print Speed

more than 2 MultiCards per minute



Versatility

formats in one print job

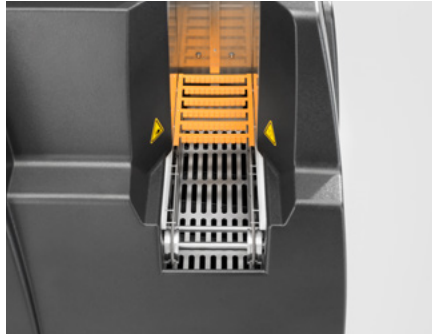


Up to
26.000
Terminal markers
per hour



Perfect durable printing results

The industrial print head of the PrintJet CONNECT is extremely robust and reliable. It provides perfect printing results and is characterised by an extremely long service life.



Economical printing of even the shortest of runs

The PrintJet CONNECT is also able to print half MultiCards. This means that even the smallest of runs, corrections, etc. can be produced economically and without unnecessary waste.



Perfect print quality even on large markers

PrintJet CONNECT can be used to print graphics or full-surface printouts at a high level of quality.



Flexible printer placement and excellent accessibility

The new design of the PrintJet CONNECT allows flexible positioning of the printer. Due to its 180° rotatable display, the front-side placed trays, and the large service flap, there is easy access for operation and maintenance in every positioning variant.



Process different markers in one job

The PrintJet CONNECT processes different formats in one print job. This means that even if different markers are used in a print job, there is no need for a time-consuming change of the print media. Up to 50 different MultiCards can be inserted into the tray.



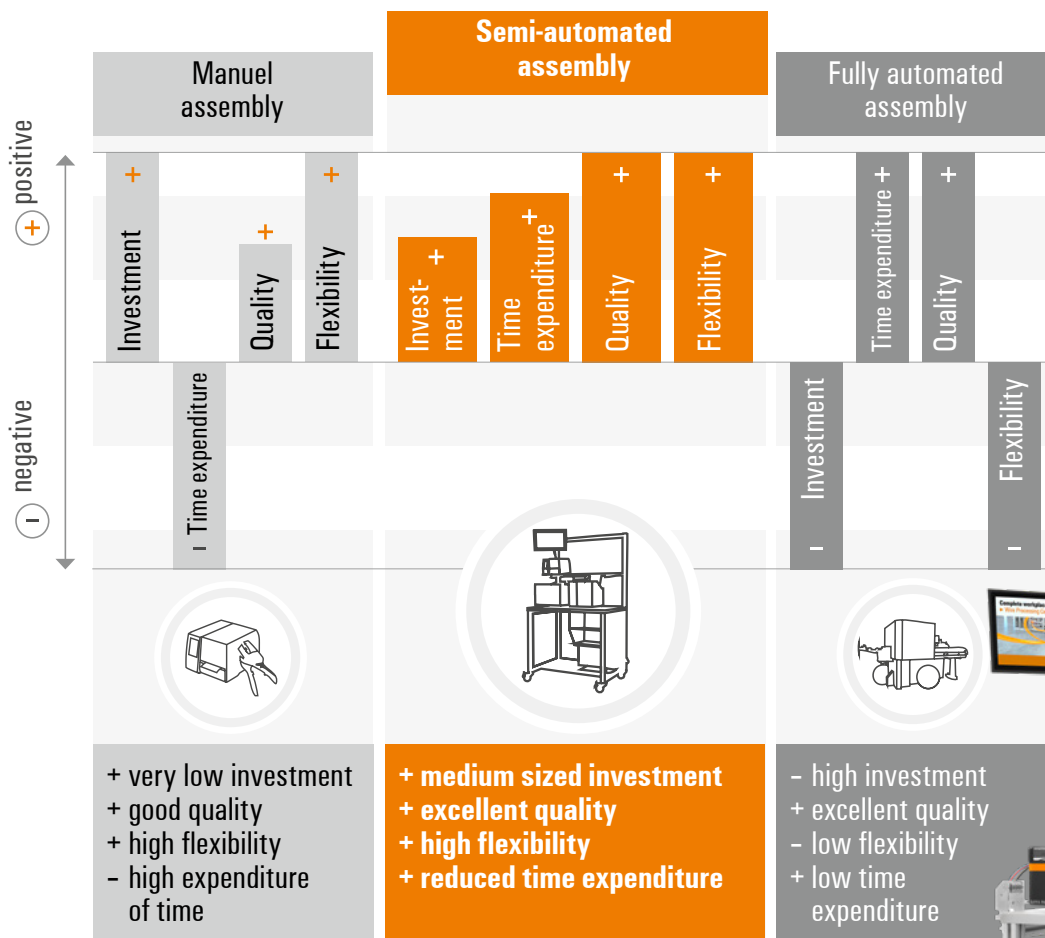
Optimal support during operation

The PrintJet CONNECT provides users with wide-ranging, easy-to-understand support in the form of graphics, videos, web or QR codes, and links to information on the web. All information can be easily selected and called up via the 7" touch display, enabling even employees who rarely work with the printer to quickly familiarise themselves with its operation.

Easy. Flexible. Efficient.

Wire Processing Center

In classic panel building, 72 % of the working time in the installation phase is required for wiring and mechanical assembly. In an environment in which the fast-moving project business is increasing and cost and deadline pressure is growing steadily, consistent optimisation and streamlining of processes is the necessary consequence. Participants in the study "Panel building 4.0" see the highest potential for improvement and savings in the installation phase in solutions aimed at standardisation and the pre-assembly of cables. The Weidmüller Wire Processing Center (WPC) addresses exactly these issues. Software-controlled, semi-automated cable assembly considerably accelerates production processes and at the same time ensures the highest quality standards. The WPC thus provides you with utmost flexibility, reliability and an efficiency increase of up to 80 %.



Efficiency increase up to
80%



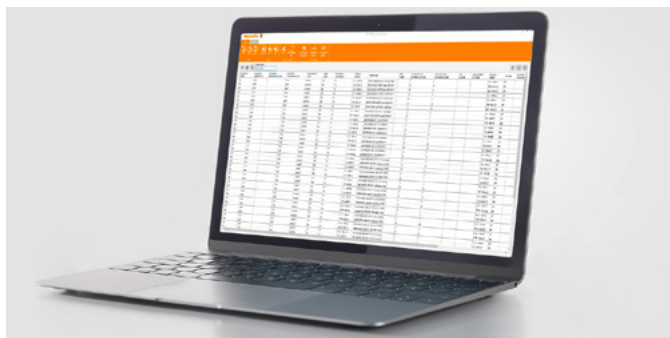
High flexibility with consistently high quality

The WPC is distinguished by its modular structure and flexibility. All of the individual devices can be used at any time in their specific functions in stand-alone mode or even purchased individually and upgraded to the system approach at a later point in time. The intuitive software makes it very easy for users to edit and now add to individual jobs.



Intelligent user guidance and easy operation

The individual devices of the WPC communicate with the WPC application software via the implemented interfaces. When the job starts, the respective data is transferred to the devices at the same time. The target state of the finished wire is illustrated for the user on the touch screen.



Planning software WPC tool

With the planning software WPC tool, data can be read and edited in different ways (manually, WSCAD, CSV files, Eplan and E3 files). Transmission to the Wire Processing Center is via the network or a USB stick.



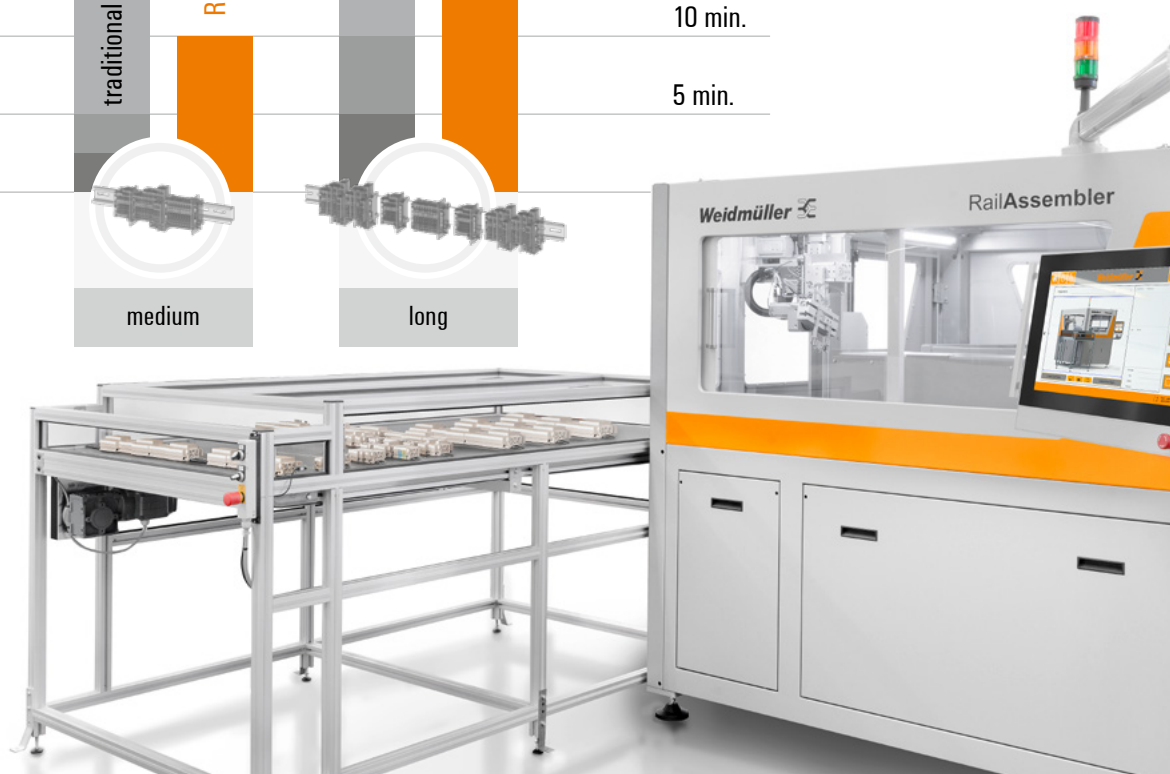
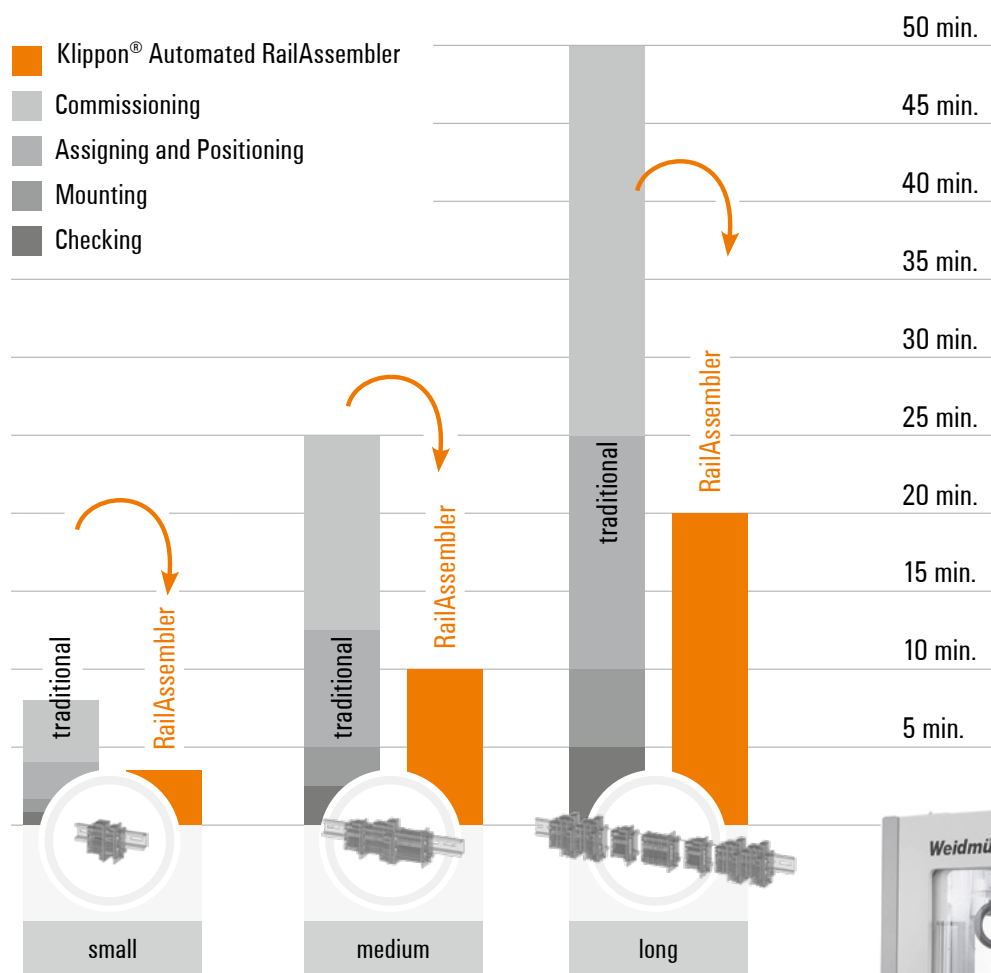
Customizing and stockpiling

The profile system offers very flexible options for optimal integration of the WPC into various processes. Various cable feeds and an integrated shelving system for consumables round off the overall package. Up to 12 conductors can be pre-installed in the optional multiple feeder.

Easy and reliable assembly

Klippon® Automated RailAssembler

The Klippon® Automated RailAssembler, in combination with the Weidmüller Configurator (WMC) software, enables the fully automatic assembly of terminal blocks. By using the automated system the commissioning, allocation and positioning of individual terminals is no longer necessary. Time savings of up to 60% can be achieved during the assembly process - and even more when considering the unmanned operation of up to 7 hours.



Time savings up to
60%*

* or significantly more considering the unmanned operation



Maximum flexibility

The universal magazines can be loaded with various components due to its universal design. Hereby maximum flexibility in operation is guaranteed. The machine has a total of 48 magazine positions for components as well as 20 positions for pre cut mounting rails.



Reliable quality

A continuous use of planning data from eCAD programs is possible through the Weidmüller Configurator (WMC). Due to the omission of the manual production steps, error potentials are minimized.



Contour robust gripper

Due to the adaptive gripper even complex component geometries can be handled robustly. Thus, the application range of the machine is maximized.



Optimized handling

Due to the generous storage capacity of the magazines filling processes are reduced to a minimum while also avoiding open quantities. Furthermore, the magazines already enable a fixed hold of individual components during the loading procedure. Consequently, the components cannot fall over on the magazine.



Matching assortment

Based on the Weidmüller standard markers a suitable portfolio of the Klippon® Connect A-Series with pre-assembled markers is available. In combination with the Klippon® Automated RailLaser for fully automatic marking, the full optimization potential can be reached.



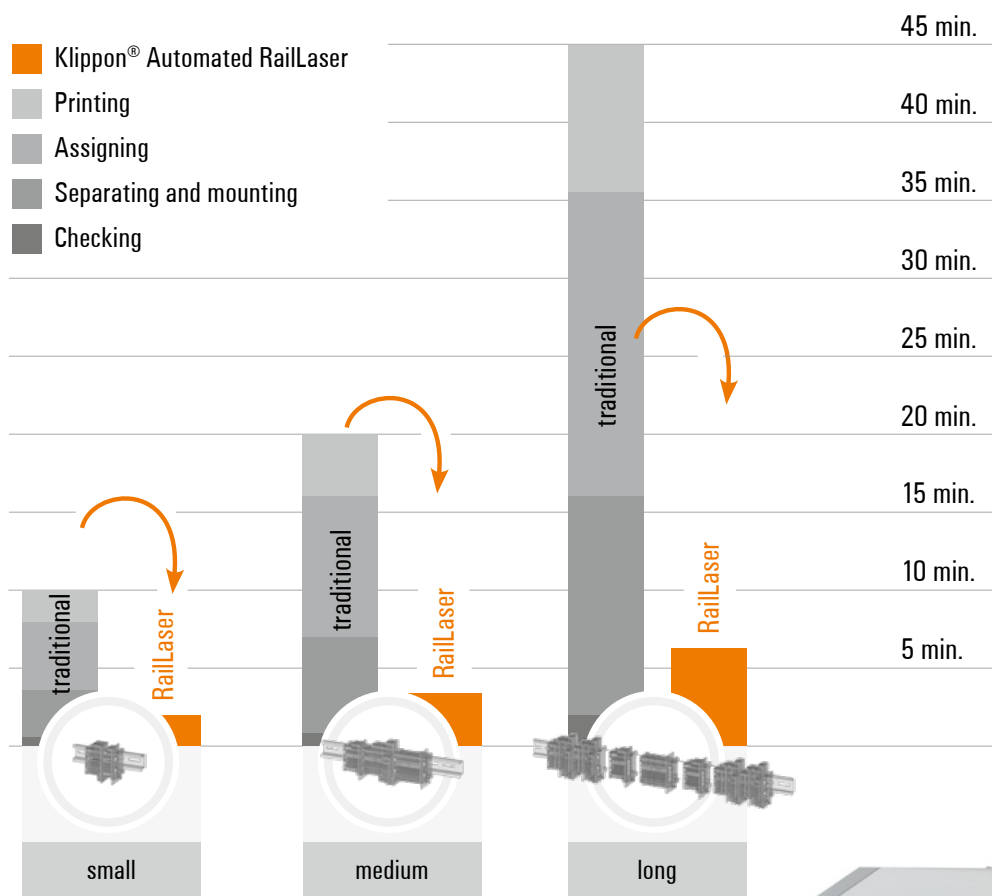
Consistent transparency

The consistent software support during all work steps assists the operator and ensuring transparency on the order status.

Fast high-precision marking

Klippon® Automated RailLaser

In combination with the Weidmüller Configurator (WMC) software, the Klippon® Automated RailLaser enables fully automatic marking of pre-assembled terminal strips. The use of terminal blocks with markers already attached eliminates the need to separate, assign and mount individual markers. This allows time savings of up to 90% in marking processes. The laser marking of the terminal strips also meets the highest demands on marking quality.



Time savings up to
90%



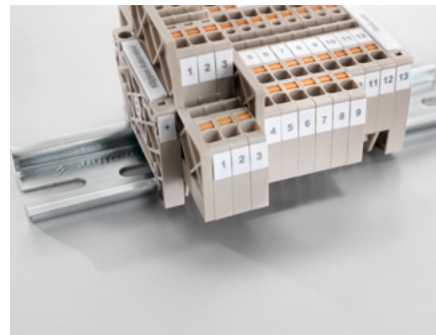
Highest performance

The innovative interaction of software, sensor technology and laser system ensures fast, high-precision marking results. Time savings of up to 90 % will take you to the next level of efficient marking.



Reliable quality

Due to the integration of the Weidmüller Configurator (WMC), planning data from eCAD programs can be used continuously. Error potentials are minimised because manual production steps and image processing in the machine are eliminated.



Robust marking

The Klippon® Automated RailLaser labels the markers directly. In this way, even the highest requirements for wipe and scratch resistance are met. The high-resolution quality ensures sharp contours and good legibility – even with the smallest markings.



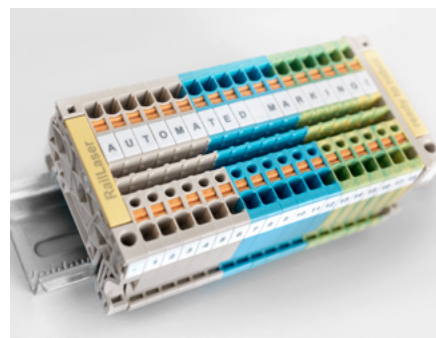
Highest flexibility

Due to the universal mounting rail holder and the laser direct marking technology, it is possible to very precisely mark terminal blocks and other mounting rail components – even with complex geometries. TS35 mounting rails can be marked from 100 to 1,200 mm in length, from 7.5 to 15 mm in height, and with a total weight of up to 15 kilograms.



Matching assortment

Based on Weidmüller's standard markers, the Klippon® Connect A-Series offers a suitably matched portfolio of pre-assembled markers. This enables the full saving potential of the Klippon® Automated RailLaser.



Universal labelling options

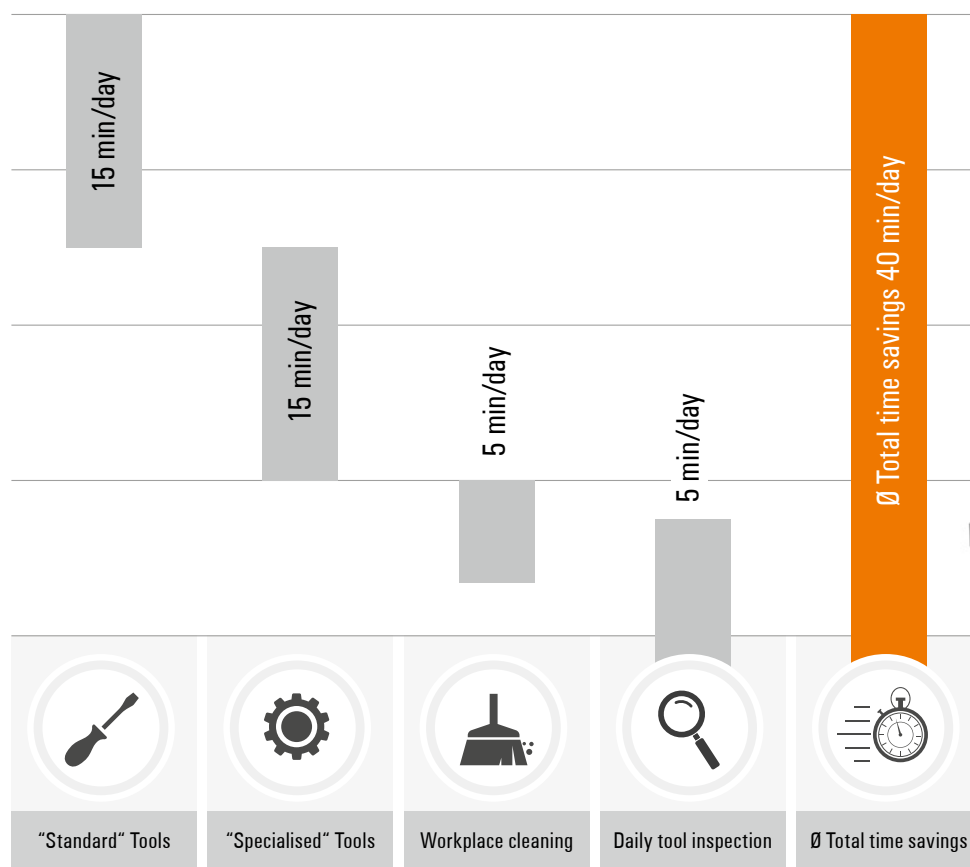
Due to the innovative laser technology, no special markers are required for the Klippon® Automated RailLaser. In addition to the pre-loaded white markers, the markers from Weidmüller's standard portfolio with their wide range of colors and materials can also be used.

Organisation and efficiency in the workplace

The Weidmüller Tool Chest

The participants in the study "Panel building 4.0" see a high potential for improvement and savings in standardisation and workplace standardisation in panel building. In a classic panel building project 72 % of the working time in installation is required for mechanical assembly and wiring. What if you could achieve a 10 % increase in efficiency through standardisation? This is possible with the Weidmüller panel building tool chest, which was specially developed according to 5S and lean principles.

Average time savings per day with Weidmüller tool chest





With the Weidmüller tool chest, every item, whether standard or rarely used specialised tool, receives its designated position. Tools in frequent use are positioned within easy reach, functional groups are also placed together. Thanks to the standardised structure and tool positioning, the time required to find, remove, clean and inspect the tools is greatly reduced when compared to non-optimised workplaces.

An additional advantage of the foam recesses is the ability to quickly identify when a tool is missing at the end of a working day. Labelling with MultiCard markers and QR codes offer additional support: they link you to the online catalogue where you can find additional information. The tool chest can be configured according to your individual requirements and optionally equipped with automatic machines and printers. Create an intelligent mobile production island tailored exactly to your individual needs, with the accustomed Weidmüller quality.



Simple Expansion

Perforated side walls and an optional rear panel allow expansion of the storage possibilities thanks to standard accessories.



Great flexibility

The three-part foam inserts enable application specific drawer layouts. The moulds of the tool inserts have a universal design making them suitable for different tools.



Distinct labelling

Easy to read labels show the name and article number of the tool whilst indicating the correct cavity. A QR-code links to further information about the tool in the online catalogue.

Our Weidmüller solutions in action

Success stories of our customers at a glance



Safe and efficient working processes in machine building

Workplace solutions from Weidmüller help to increase process efficiency at this global technology group

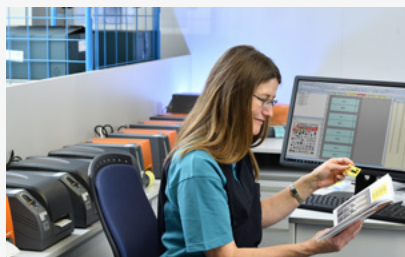
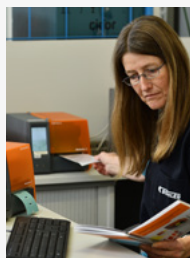
The Bühler group utilizes the interplay between innovation and efficiency to generate a competitive advantage with high-quality, long lasting products. "Every single day we work on making our processes more streamlined while also reducing the complexity", explains Samuel Hauri, Group Leader of Engraving & Confectionaries at Bühler. The M-Print® PRO marking software from Weidmüller is based on the logic of well-known office systems, which was a clear deciding factor for the company.



Modern, efficient workstations

Individually customised tool chests that are standardised for all users

K. Schweizer AG is a large controller and plant manufacturer. Specialising in installation and panel building, it focuses on distribution cabinets in the building sector, as well as building automation and classic control engineering. The 15 tool chests from Weidmüller are used at the company every day and they help with the wiring of controllers, house junction boxes and many other electrical wiring tasks.



Panel building 4.0

Digitalisation and automation at Aventech by Reyes Group

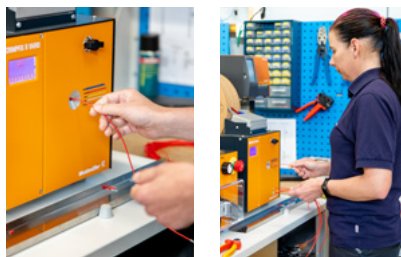
The collaboration between Aventech by Reyes Group and Weidmüller shows what this kind of optimisation could look like in the factory of the future, based on a new generation of automated assembly lines. The two companies launched a partnership roughly one year ago, with the goal of optimising productivity based on solutions developed by Weidmüller in automated assembly. Aventech uses Workplace Solutions for semi- and fully-automated assembly.



New kids on the block PrintJet CONNECT & Weidmüller Configurator at WHP Solutions

What can be improved in panel building? Hans Walterscheid-Müller and Paul Hauser, Managing Directors of WHP Solutions, are confidently tackling the field of engineering, technical expertise, and their collaboration with Weidmüller.

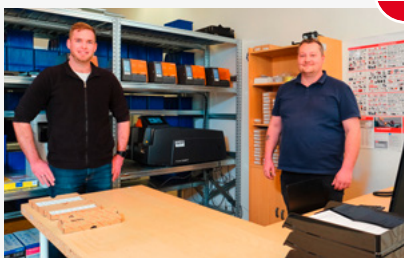
"You can buy the best camera available, but if you do not know how to use it, you still will not be able to take good photos", says Paul Hauser, Managing Director of WHP Solutions, making an interesting connection to the various software tools for engineering. These tools, after all, are only as good as the user can make them.



Semi automation in panel building We talk to André Rose of BN Automation about using the Wire Processing Center

BN Automation AG specialises in automation, data solutions and IT, looking for profitable, assisted solutions. „We had spent a long time looking for assisted solutions for cable assembly“, explains André Rose, Head of Panel Building at BN Automation AG.

By using the WPC, quality has been improved compared to the cables that were previously laboriously assembled by hand.



Schneller. Verlässlicher. Individueller. Schaltschrankbau der neuesten Generation im Unternehmen BAH Industrial Solution

As a medium-sized company, BAH Industrial Solutions has been a reliable partner to countless industrial companies for years – from SMEs to global players. BAH Industrial Solutions stands for fast and flexible solutions with high-quality results in the areas of panel building, quality control/testing, industrial assembly, engineering and service in data centres.

With its use of RailAssembler and RailLaser from Weidmüller, BAH is opening up digital production processes and creating continuous manufacturing processes with a consistently high level of quality.



Read more on our website:
www.weidmueller.com/success-stories-wps



Weidmüller – Your partner in Industrial Connectivity

As experienced experts we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signal and data. We are at home in their industries and markets and know the technological challenges of tomorrow. We are therefore continuously developing innovative, sustainable and useful solutions for their individual needs. Together we set standards in Industrial Connectivity.

We cannot guarantee that there are no mistakes in the publications or software provided by us to the customer for the purpose of making orders. We try our best to quickly correct errors in our printed media. All orders are based on our general terms of delivery, which can be reviewed on the websites of our group companies where you place your order. On demand we can also send the general terms of delivery to you.

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