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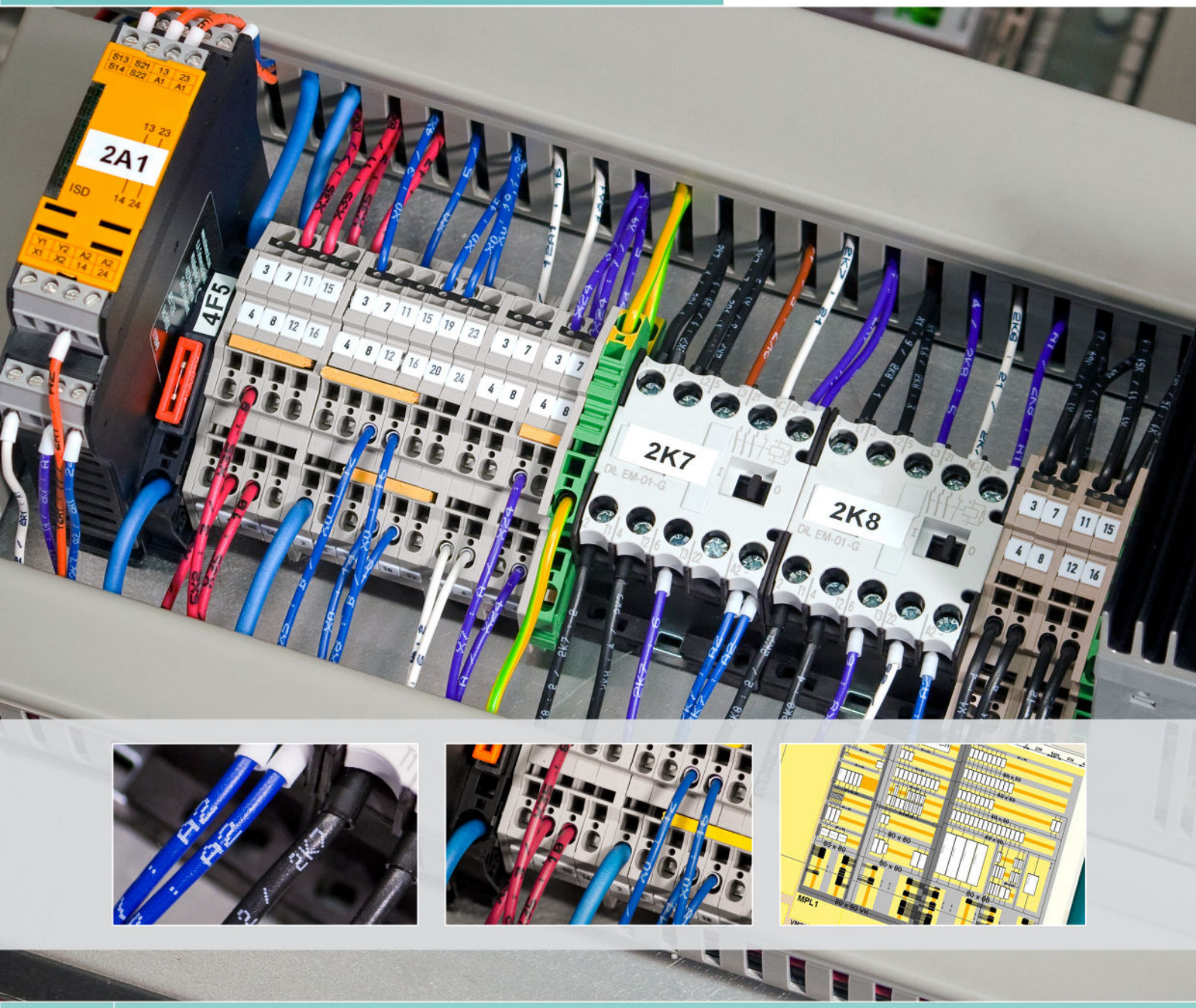


Metzner Triathlon System

Automation and Cost Reduction in Control Cabinet Manufacture

Metzner Triathlon System

Automation and Cost Reduction in Control Cabinet Manufacture

Metzner Triathlon 2000

The budget-level entry model is equipped with all the main automation processes needed for control cabinet manufacture: precise cutting to length, single or double-sided stripping, terminal crimping and individual printing of the wires.

Metzner Triathlon 3000

Similar equipment to the Triathlon 2000, but with additional outstanding features: processing of wires (up to 35mm²) or cables up to 15mm diameter, lengthways slitting unit and increased feed speed.

Solutions for Single Component and Small Series Production

Automation in control cabinet manufacture is not only a worthwhile proposition for long production runs. Particularly for single component and small series production, considerable economies and improvements in efficiency can be achieved by the adoption of automatic converting processes.

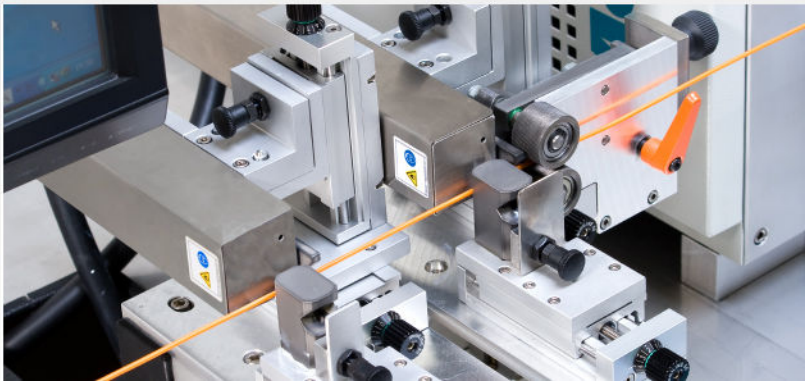
With the Triathlon System, Metzner offers a unique and complete system solution for reducing your costs in the manufacture of control cabinets. Dependent on the actual requirements, different solutions are available to you, solutions which differ in their construction, performance and their degree of automation. From the budget-level Triathlon 2000 up to the flexible and fast Triathlon 5000, we can offer you the right solution to match your needs.

Outstanding Basic Specification

All Triathlon model cut cables to the correct length, strip the wires at the precise positions and crimp the cable end terminals. At the same time, they add freely-programmable text and logos and take away the processed material according to pre-arranged sorting programs.

Large-Scale Time and Cost Savings

Not only in the cutting and preparation of the cables but also in the subsequent wiring of the control cabinets, you save valuable time and costs. Because all the wires are printed and pre-sorted into their component groups, the cabinet wiring can be carried out considerably faster than previously. In addition, the number of wiring faults is reduced to virtually zero. Depending on machine loading, savings of up to 70% can be achieved, resulting in amortisation of the Triathlon machines in less than two years.



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Metzner Triathlon 5000

The auto-crimping machine with outstanding throughput capability. Offering up to 1200 pieces/hour with single or double-sided ink-jet printing, the Triathlon 5000 is the ideal machine for all manufacturers of control cabinets with very high-volume parts requirements.

Metzner Triathlon Soft©

The simple, easy-to-follow software package for the digital creation of a control cabinet layout and the production of all the data required for the subsequent automatic machining.

A Choice of Printing Systems

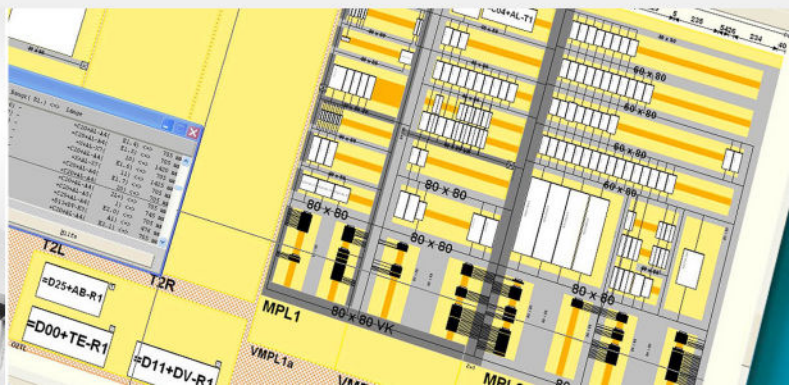
For identification, wires and cables are generally given text or distinguishing marks. To meet the different requirements, Metzner offer different printing and marking processes: Ink jet printing, thermal transfer and Brady Wraptor printing (more information on page 4).

Intelligent Software

Triathlon Soft® starts with the control cabinet layout and automatically calculates the lengths for all the wires, cable trays and cable ducts. At the same time, Triathlon Soft® produces all the data for the printing of the cables and the machining of the assembly baseplates. Via an interface to its CAE system, the software collects all the necessary data in the form of wiring lists, sub-assembly lists or terminal lists and processes them on this basis into a production-orientated layout for the control cabinet. Triathlon Soft® is compatible with all commonly-used drilling centres and automatically creates all the data for the mechanical processing of the assembly baseplates. All the NC-data for automatic machining are produced by working from the construction plan and an optimised interface transfers the data to a drilling and milling machine.

Comprehensive and Problem-Free Import and Export Functions

For data transfer, import-interfaces are provided for the following CAE systems: EPLAN, Elcad, Ruplan, Sigraph-ET, Caddy, ECD-Cad, ESP, TreeCad, Elocad, WS-Cad, CAE33, Promis, Eltime and Comos PT/ET. In addition, there are layout interfaces for Elcad (Elcad-Fastwire), ElproCad, Caddy, Autocad CWC and COMOS PT/ET.



Metzner Triathlon System

The performance data – convincing facts

Metzner

Plenty of Printing Options

For product identification and to determine assembly positioning, cables and wires often have to be printed or marked. In response to a variety of requirements, Metzner offers three different printing systems from leading manufacturers.

Ink-jet printers (Fig. 1) can produce freely-programmable text, logos or marks in-line »on the fly« and with no lost time. The ink-jet printer is a relatively economical process, although the print quality is not as good as with thermal transfer or the Brady Wraptor.

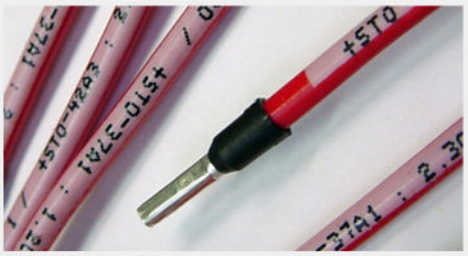


Fig. 1: Ink-jet printing

Thermal transfer printer (Fig. 2) is recognised by its high print quality. Here, too, text, logos and graphics can be individually formulated and printed. The printing process requires a short interruption of ca. 1.5 seconds.

Fig. 2: Thermal transfer printing

The **Brady Wraptor** (Fig. 3) similarly gives a high print quality. Its special feature is that all texts are produced on a white background and then wrapped with a transparent film. Whatever the colour of your cable, the lettering can always be seen in the best contrast. This type of marking requires a stop of nearly 5 seconds.

Fig. 3: Printing with the Brady Wraptor system

Performance Data	Triathlon 2000	Triathlon 3000	Triathlon 5000
Wire outer diameter max.	4mm with crimping, 6mm w/o crimping	4mm with crimping, 15mm w/o crimping	4mm with crimping, optional 6mm
Cross section wire cutting to length [1]	0.14mm² – 6mm²	0.5 mm² – 35mm²	0.22mm² – 2.5mm², optional: 4mm²
Cross section wire crimping max. [1]	2.5mm², optional: 4mm²	2.5mm², optional: 4mm²	2.5 mm², optional: 4mm²
Wire length min. [2]	160mm	250mm	50mm
Wire length max.	999m	999m	999m
Stripping length max. side 1	70mm	220mm	15mm
Stripping length max. side 2	40mm	170mm	15mm
Feeding speed max.	1 m/sec	2 m/sec [3]	3 m/sec [3]
Numbers of crimping stations	1	1	3
Cutting rate, printing included	400 pcs/h	400 pcs/h	1200 pcs/h
Printing systems	one or two ink jet printers, thermal transfer printer, Brady-Wraptor		one or two ink jet printers

Technical Data			
Electrical connection	230 V, 50/60 Hz, 1,4 A	230 V, 50/60 Hz, 3,1 A	3~400 V, 50/60 Hz, 3,8 A
Compressed air connection	6 bar	6 bar	6 bar
Noise level w/o material	< 75 dB(A)	< 75 dB(A)	< 75 dB(A)
Dimensions (LxWxH)	1450 x 1050 x 1450mm	1750 x 1100 x 1520mm	2900 x 1450 x 1850mm [4]
Weight	200 kg	250 kg	550 kg

[1] depending on material | [2] shorter lengths possible without crimping and stripping | [3] higher speeds possible without printing | [4] with closed cover
Specifications are subject to change without notice.

www.metzner.com

Metzner Maschinenbau GmbH
Messerschmittstraße 30
89231 Neu-Ulm | Germany
Phone: +49 731 40199-0
Fax: +49 731 40199-33
Email: info@metzner.com