It is very time-consuming to design and build control cabinets manually and is dependent on specialists. To slash the throughput time and make production processes more flexible and ideal, Komax offers a range of optimum automation solutions. These are designed to improve the process, increase efficiency, and reduce the technical demands associated with assembly. As a result, they generate major time and cost savings while simultaneously boosting quality and economic efficiency. These perfectly coordinated solutions cover all your needs from entry-level automation right through to fully automated wire assembly – whether you are producing a single control cabinet or manufacturing small or large series.

**Save with automation**
- Reduce your production costs
- Cut your production times by up to 50 %
- The savings start from a batch size of one

**Flexibly increase efficiency**
- Wide processing area for wire ends
- Optimized logistics
- Greater workforce flexibility, due to intuitive guidance in work processes

**Achieve top quality**
- Less personnel training required
- Fewer input errors
- Consistently high quality throughout
IMPROVING ECONOMIC EFFICIENCY
WITH AUTOMATION
SHORTER PRODUCTION TIMES – MAXIMUM EFFICIENCY

Cut time and costs
It takes a specialist around 105 seconds to process one wire manually. For example, if there are 500 wires inside the control cabinet, it adds up to 15 hours. With semi-automated production, you can cut the amount of time required by up to 35 percent. And with fully automated production, you can reduce it by up to 50 percent – to just 7.5 hours.

Consistent data flow
Data is prepared efficiently using the Komax DLW (Digital Lean Wiring) software or via ECAD with reference to wire lists, a wiring diagram, or 2D drawings.

Automation that relies on consistent data flow optimizes quality and reduces input errors. Within this framework, ready-to-install wires can be produced fully automatically: by cutting them to the correct length, assembling them, and labeling them. What’s more, you can even produce the cables sequentially in the correct order of installation and tie them.

Greater flexibility
You can process the wire ends in a whole host of ways: by attaching ferrules, crimp contacts, or MIL crimps, or compacting them through ultrasonic welding. The solutions feature fully integrated inkjet labeling systems to ensure that everything is always labeled in accordance with the diagram. This simplified approach means that control cabinet wiring can be carried out by less specialized personnel.

Perfectly coordinated automation
By offering solutions to match any requirements, the market leader Komax is opening up the huge potential for automation in control cabinet construction. Its semi- and fully automatic state-of-the-art machines ensure maximum efficiency on any scale: from individual units through to small and large series.

Fast, automated processes
IDEAL FOR ANY
LEVEL OF AUTOMATION

Cut and strip –
Low level of automation
Semi-automated production sorted according to cross-section

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<thead>
<tr>
<th>Processing options</th>
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<tbody>
<tr>
<td>Labels</td>
<td><img src="image" alt="Ink Jet TopWin" /></td>
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<tr>
<td>Wire production in sequences</td>
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Crimp to Crimp –
Moderate level of automation
Fully automated production sorted according to cross-section

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<tr>
<td>Process wire ends (ferrule, crimp, weld, etc.)</td>
<td><img src="image" alt="Process wire ends" /></td>
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Harness manufacturing – High level of automation

- Fully automated production sorted according to assemblies (sequential production)
- Tied with tape

Processing options

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| Wire production in sequences |

| Process wire ends (ferrule, crimp, weld, etc.) |

| Bundle wire sequence |
EASIER DATA HANDLING WITH DLW

The simple alternative
In order for the control cabinet construction process to be automated, the first step is to collect the production data, including the cable length. The DLW (Digital Lean Wiring) software developed by Komax offers the ideal solution for this with its clear focus on simplicity and flexibility. It offers various options for importing and preparing the data. For instance, you can use existing wire lists to define how the connections should be marked. You can also import 2D drawings in a variety of formats with ease. If you want to avoid the high costs involved with maintaining a component database of standard ECAD systems, virtual wiring can be carried out based on a high-resolution photo. This keeps product maintenance to an absolute minimum.

Photographic dimensioning with Roundshot
A high-resolution photo of the control cabinet is a really easy way of dimensioning the lengths of the cables. This image is captured by the optionally available Roundshot camera. This takes several individual images and combines them to create one dimensionally accurate overall image, which is then imported into DLW.

Virtual wiring
In the DLW software, the technician uses this image or a 2D drawing to wire the cables virtually on the screen. This is a highly efficient method of determining the cable length per connection. After that, the production data is converted and uploaded to the wire processing machine, which produces the ready-to-install cables.

DLW Viewer – Guided assembly
The DLW Viewer features a streamlined, touch-operated interface. This guides the operator along the wiring path as they lay the pre-assembled strands virtually on the screen. As a result, this processing step can be carried out by less highly specialized personnel.
As a pioneer and market leader in the field of automated wire processing, Komax provides its customers with innovative and sustainable solutions for any situation that calls for precise contact connections. Komax manufactures series and customer-specific machinery for various industries, catering for every degree of automation and customization. Its range of quality tools, test systems, and intelligent networking solutions complete the portfolio, and ensure safe and efficient production.

Komax is a globally active Swiss company with development and production facilities on several continents. It supports customers locally in more than 60 countries with its extensive distribution and service network, ensuring the availability and value of their investments after equipment commissioning through standardized service processes. Komax includes more than 30 companies worldwide and employs around 1700 members of staff.

Market segments

Komax offers outstanding competence and solutions for various areas of application and draws on them to generate the desired value-added for the entire process and optimize economic efficiency in line with customer requirements. The main markets of Komax are as follows: automotive, aerospace, industrial and telecom & datacom. With this breadth of experience, customers obtain expert knowledge for process optimization and access to the latest technologies.