



# ZETA 620

harness manufacturing

**komax**

## ZETA 620

The compact, fully automatic Zeta 620 wire processing machine produces entire parts lists and stores wires sorted and labeled, all in the tightest of spaces. Tried and tested Zeta technology and attractive module options simplify production considerably and ensure noticeable time and cost savings. Take advantage of this low-cost entry point into automation and secure a significant competitive advantage, both now and in the future.

### Cost-efficient automation process

- Enormous time savings of up to 50% due to higher efficiency and accuracy
- Significant simplification in production
- Continuous data flow from ECAD or DLW to the machine
- Cost-efficient just-in-time production for batches of any size
- Optimal wire depositing

### High productivity

- Complex jobs are completed quickly and without great effort
- Batch or sequence production without changeovers
- Automatic wire changer with up to 24 different wires
- Automated marking of the wire by inkjet and tube marking
- Processing of five different ferrules with the CM F20 module

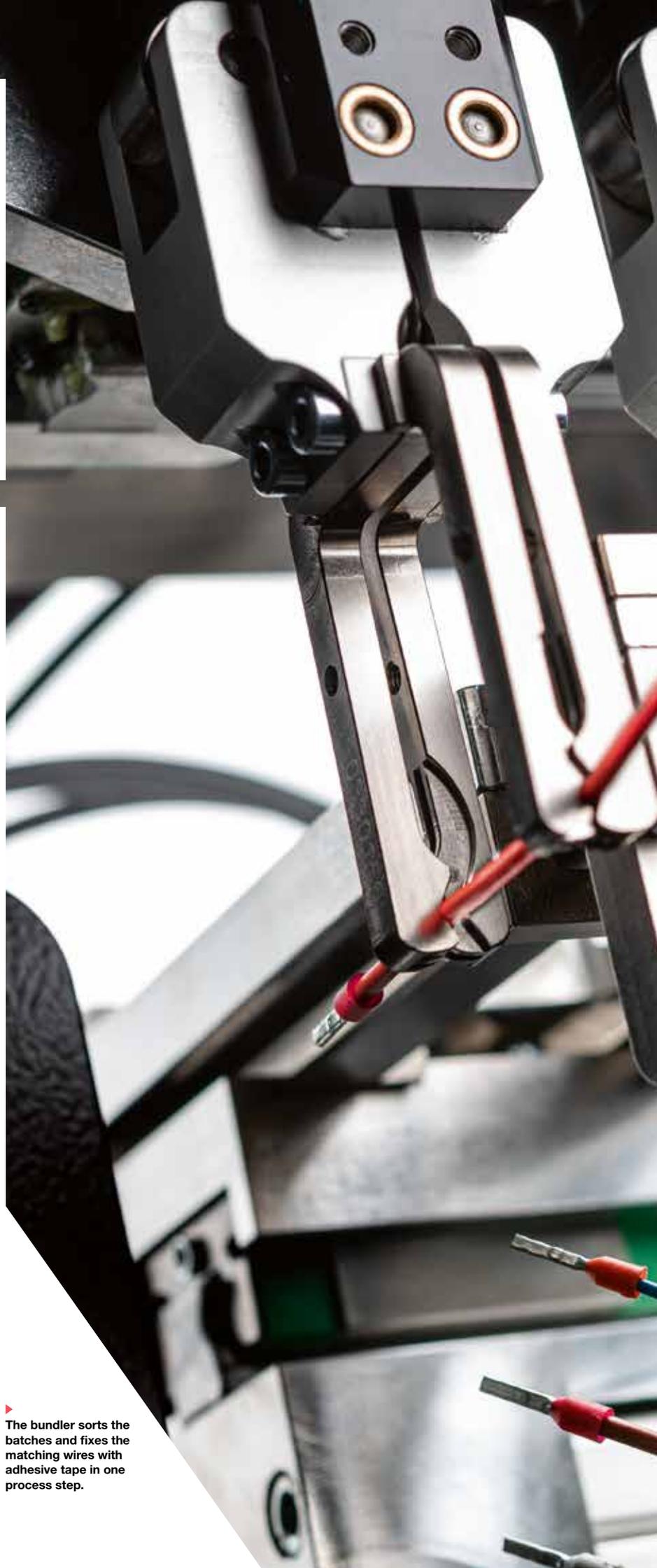
### Reliable processing with the highest quality

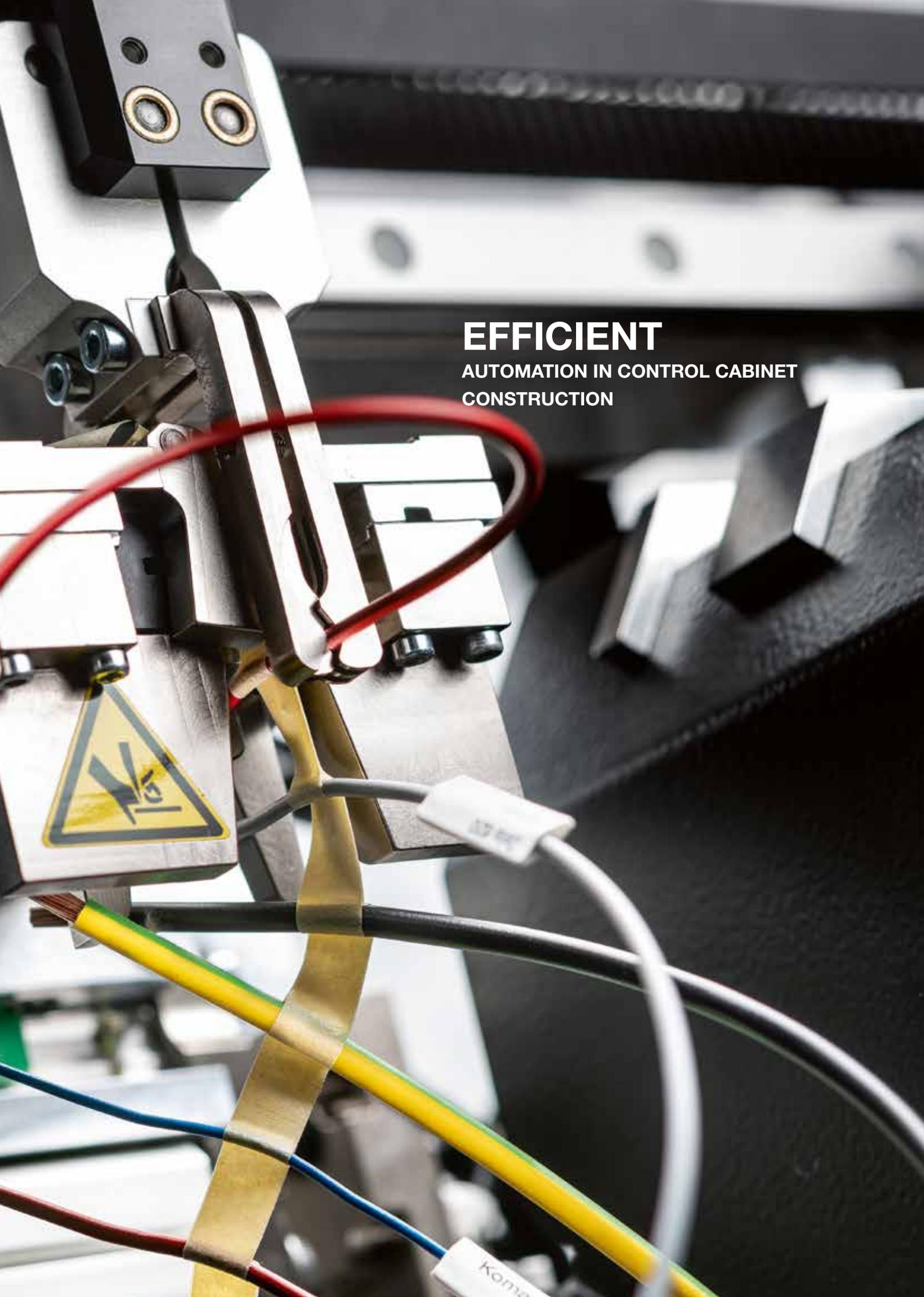
- Sequential processing of single-conductor wires in the cross-section range 0.5 – 6 mm<sup>2</sup>
- Consistently high quality thanks to fully automatic production

### Attractive entry-level model with low space requirement

- Compact dimensions 2150 × 1545 mm
- Fits in any room
- Up to two inkjet markers can be optionally integrated

▶ The bundler sorts the batches and fixes the matching wires with adhesive tape in one process step.



A close-up photograph of industrial machinery, likely a control cabinet. The image shows various metal components, including a grey metal block with two circular ports at the top. A red cable is looped around a central metal part. Below it, a grey cable with a white connector labeled '37 95' is visible. A yellow and black triangular warning sign with a hand icon is attached to a metal plate. In the foreground, several colored cables (yellow, green, blue, red) are bundled together with a yellow tape. A white label with the text 'Koma' is partially visible at the bottom. The background is blurred, showing more of the machinery.

# EFFICIENT

AUTOMATION IN CONTROL CABINET  
CONSTRUCTION

# HIGH PRODUCTIVITY FROM A BATCH SIZE OF ONE

## **Time savings of up to 50%**

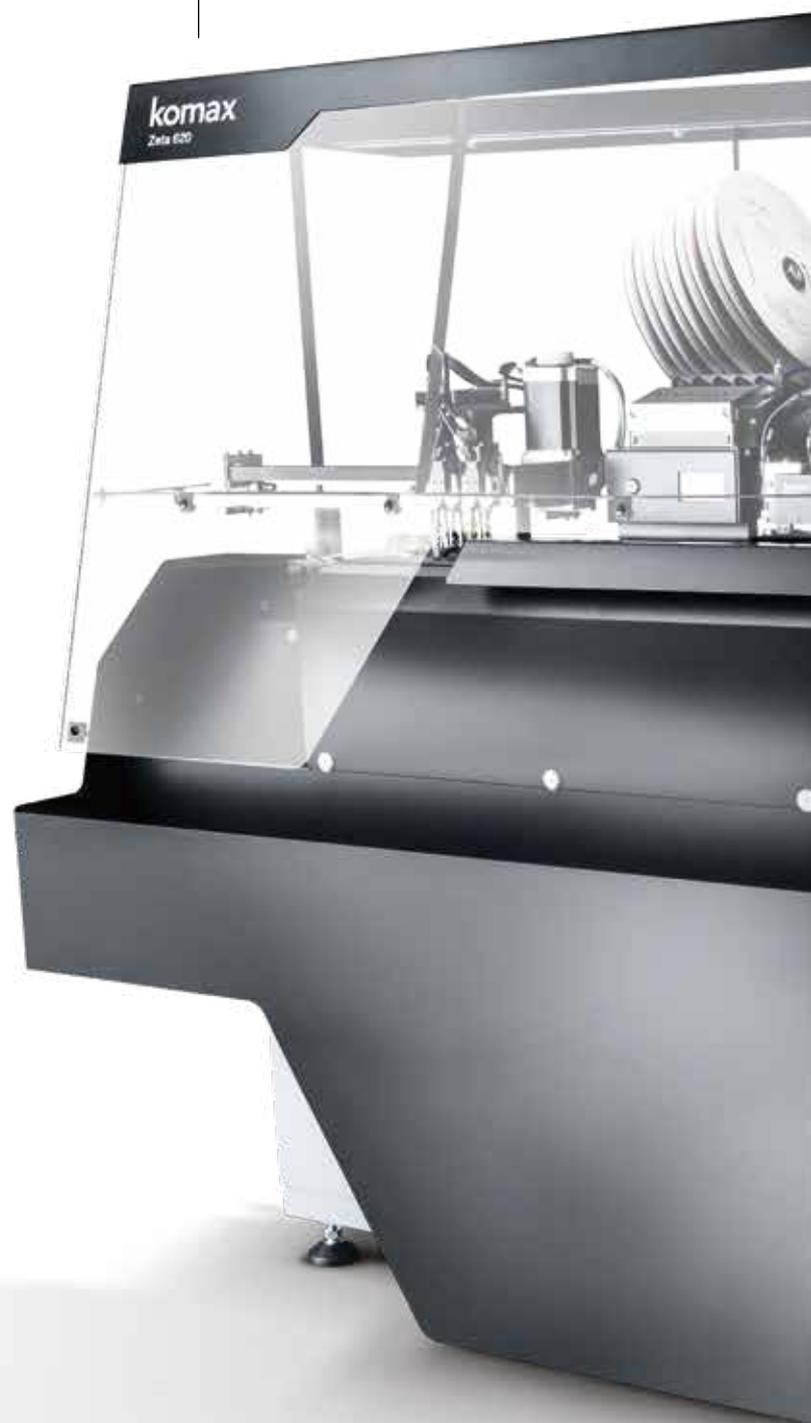
Manual processes cost time. The Zeta 620 reduces manual work to a minimum. It automatically assembles all wires required and prepares them fully equipped in the correct sequence and length – including labeling and terminals. The wires then only have to be laid at the control cabinet. Manual processes such as cutting to length, stripping, labeling and inserting sleeves are eliminated.

## **Continuous data flow from ECAD to the machine**

Production data can be sent directly to the machine from specific ECAD systems via the Komax WPCS interface. Exporting data from ECAD systems to a cutting list is also possible. This is converted into readable data and inputted, eliminating the need to manually program articles on the machine. This is highly efficient for any batch size – even a batch size of one.

## **Consistently high quality thanks to automation**

Fully automatic production guarantees reproducible, consistent quality. Automated data transfer eliminates sources of error, as no manual input is required at the machine.







01

02

**01**  
The Zeta 620 offers space for two process modules, which can be equipped with various combinations of ferrule modules or alternatively with a tube marking module.

**02**  
The sheer number of control cabinet construction variants calls for a high quantity of wires to be available. The automatic wire changer contains up to 24 different wires from the entire cross-section range.



### Wire bundles simplify subsequent wiring in the control cabinet

Depending on the job, wires can be produced, sorted and bundled in an ideal sequence, in one process step. The wire bundles make it quicker and easier to lay wires in the control cabinet. Batches can be taken out in advance while production is running. The binder type is freely defined for each wire, independent of the production mode (batch or sequence production).

### Reliable sequential processing

The special cutting head with three pairs of blades allows cross-sections from 0.5 to 6 mm<sup>2</sup> to be processed perfectly in sequence. High-quality, durable blades and components allow high processing speeds, which shortens throughput times accordingly.

### Required materials available at any time

Versatile control cabinet construction requires many different materials, such as wire types and ferrules. These are available on the Zeta 620 without the need for changeovers. The automatic wire changer contains up to 24 different wires from the entire cross-section range. The automated marking system labels the wires optimally and the ferrule module then fits them with up to five different ferrules.

03

With its compact dimensions, the Zeta 620 fits into any room. The optional inkjet markers are integrated into the chassis by means of a drawer.

03





### Wires equipped easily with five different ferrules

The CM F20 is an attractive, flexible solution for control cabinet construction. Five different taped ferrules with cross-sections of 0.5 – 2.5 mm<sup>2</sup> and crimp lengths of 8 or 10 mm can be processed quickly and easily in sequence. Special ferrules (Multinorm, AWG) are also not a problem. The ferrule rollers are inserted without tools or component changeovers. The touch display is intuitively designed. A two-stage process ensures reliable processing. Automatic cable centering adjusts to the cross-section. The CM F20 is a high-performance ferrule module that is easily integrated into a fully automatic Komax machine such as the Zeta 620.

### Technical data CM F20

|                     |   |
|---------------------|---|
| Cross-section range | 0.5 – 2.5 mm <sup>2</sup> (AWG 20–14)   |
| Ferrules            | Z+F ferrules on rolls,<br>0.5 – 2.5 mm <sup>2</sup> (AWG 20–14)<br>Type: N,HL (standard) / S-N,S-HL<br>(Multinorm, AWG) |
| Ferrule length      | 8 mm or 10 mm   |
| Crimp form          | Trapezoid crimp form  |
| Operating pressure  | 5 – 6 bar   |
| Dimensions (WxDxH)  | 205 × 397 × 491 mm without castors<br>283 × 460 × 635 mm with castors   |
| Weight              | 26.5 kg   |



### DLW – the simple alternative

For automation of the control cabinet construction process, an important requirement is to collect the production data, including the wire length. DLW (digital lean wiring) software developed by Komax offers the ideal solution for this with its clear focus on simplicity and flexibility.

### Virtual wiring

On the basis of a photo or a 2D drawing, technicians can complete the wiring virtually on a screen using DLW. This is a highly efficient method of determining the wire lengths per connection. The production data is then converted and loaded onto the wire processing machine, which produces the wires ready for installation.



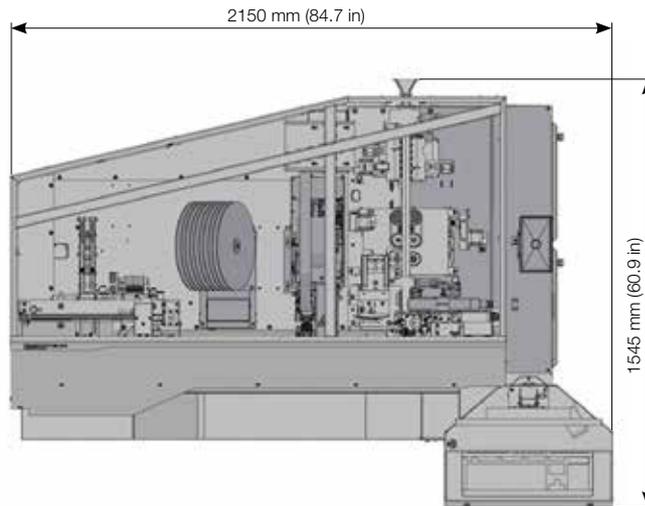
◀ The optional M1650 Tube equips cables with a pre-labeled tube. The position of the labeling is thus flexible.

### Technical data Zeta 620

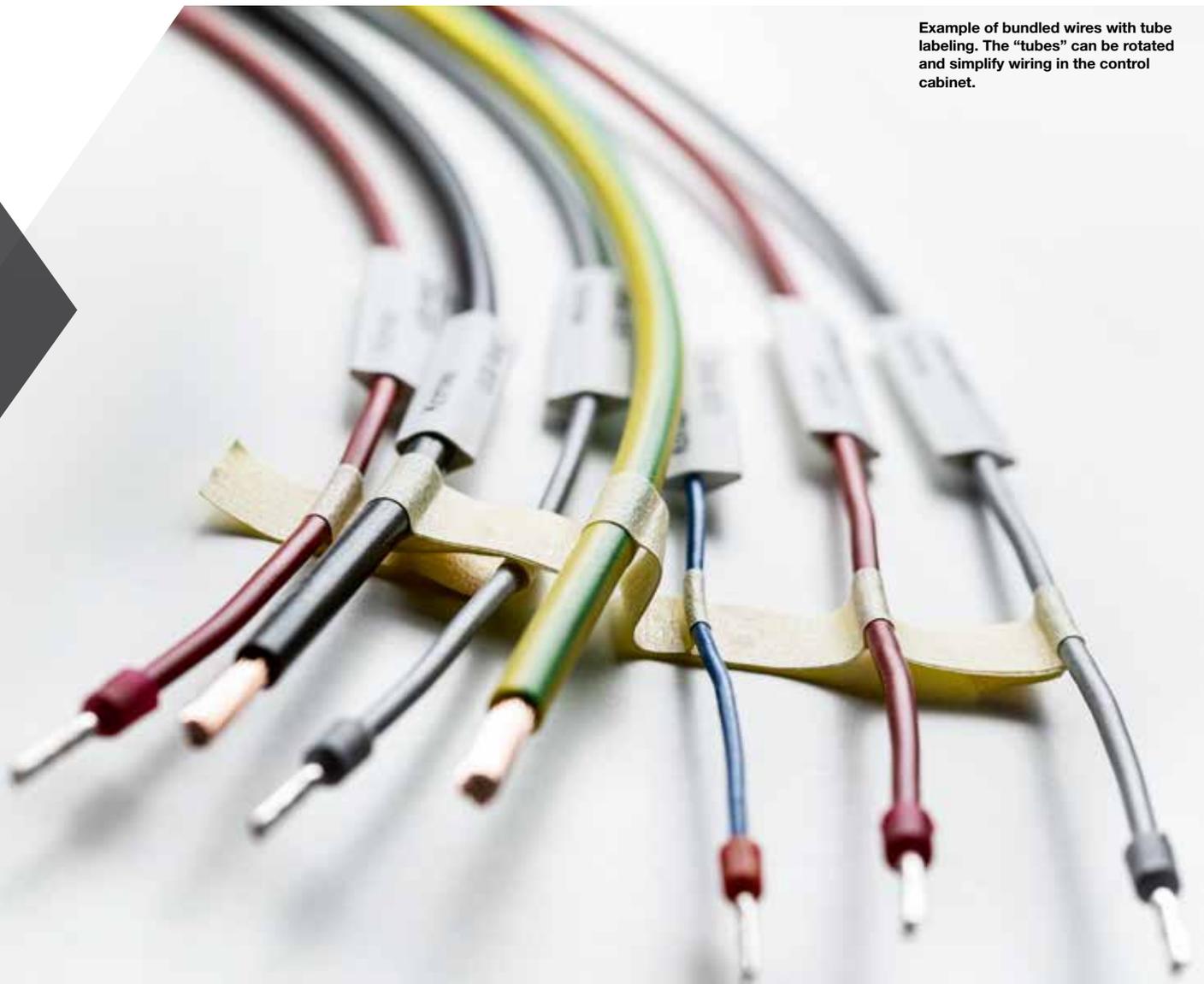
|   |                                    |
|---|------------------------------------|
| Outer wire diameter                           | Max. 6 mm (0.24 in)                |
| Wire cross-sections                           | 0.5–6 mm <sup>2</sup> (AWG 20–10)  |
| Wire length tolerance                         | ±0.5% + 2 mm (0.079 in)            |
| Wire length range for double-sided processing | 240 mm to 4 m (9.44 in to 13.1 ft) |
| Wire length range for one-sided processing    | 60 mm to 4 m (2.36 in to 13.1 ft)  |
| Wire changer                                  | Maximum 24                         |
| Strip length                                  | Up to 25 mm (0.98 in)              |
| Number of stations                            | 2                                  |
| Piece output, AEH – AEH                       | 360 pcs/h                          |
| Piece output, stripped on both sides          | 700 pcs/h                          |
| Weight  | Approx. 700 kg                     |

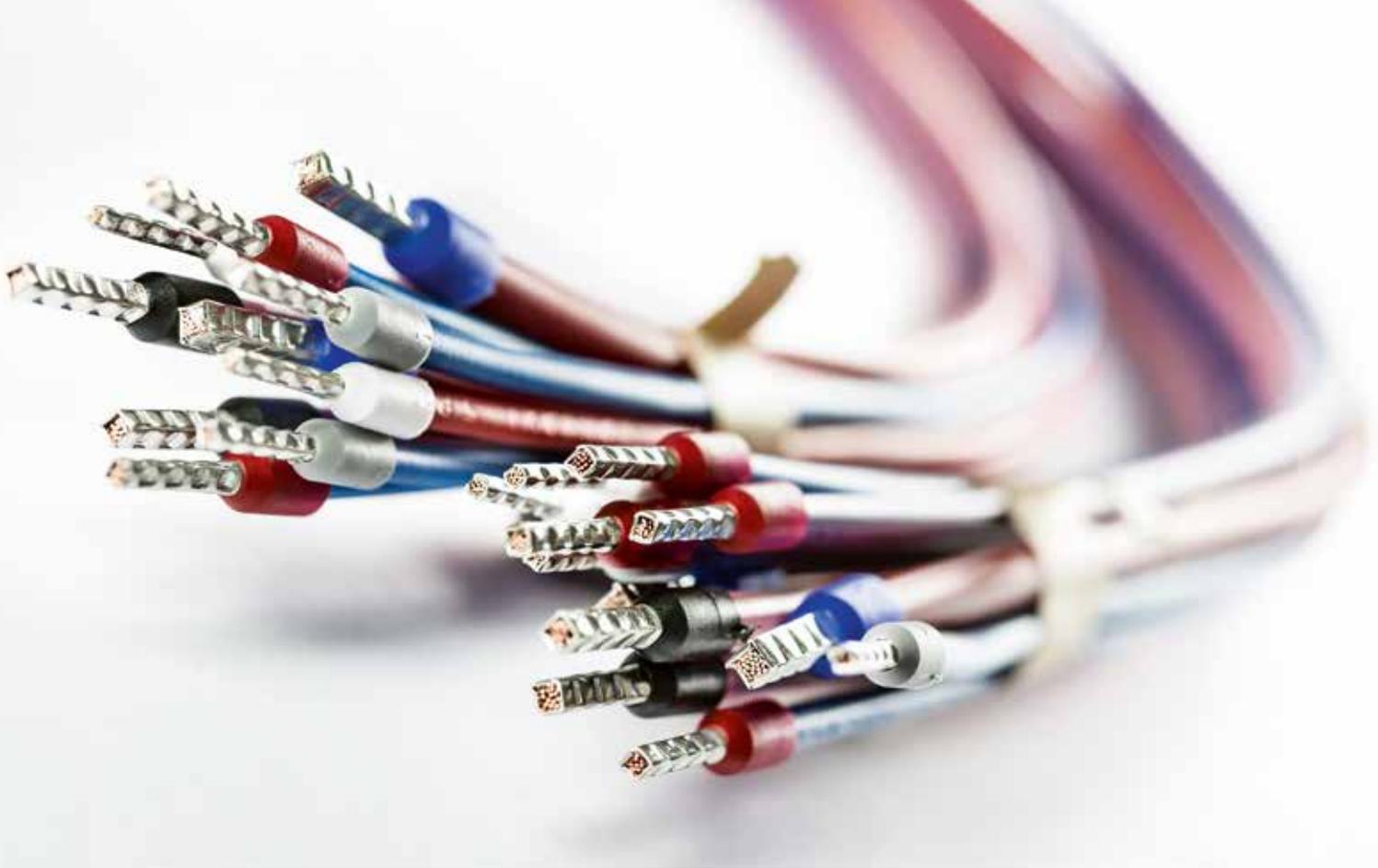
## Module combinations

| Station 1  | Station 2                                |
|------------|--|
| CM F20     | CM F20<br>AEH-LS<br>CM 1/5               |
| AEH-LS     | CM F20<br>AEH-LS<br>CM 1/5               |
| M1650 Tube | M1650 Tube<br>CM F20<br>AEH-LS<br>CM 1/5 |
| CM04 Duo   | CM F20                                   |



Machine height with closed safety cover 1735 mm (68.3 in)  
Machine height with open safety cover 2735 mm (107.7 in)





## Options and accessories

|                 |  |
|-----------------|--|
| Marking systems | M1630 Jet • M1650 Tube tube marking module                               |
| Wire draw-in    | Wire changer 24-fold   |
| Process modules | Ferrule module CM F20 • AEH-LS • CM 1/5 • CM 04 Duo                      |
| Software        | WPCS networking interface • TopConvert data conversion • Komax MES • DLW |

## Processing examples

|   |  |  |  |
|---|--|--|--|
| Cutting                                     |  | Wire deposit system/spot taping              |  |
| Cutting pulled strands                      |  | Wire length correction                       |  |
| Full stripping                              |  | Good and bad separation/<br>bad-part cutting |  |
| Half stripping                              |  | Sequence processing                          |  |
| Ferrule crimping                            |  | Batch separation                             |  |
| Wire end solidifying,<br>splicing, welding* |  | Networking (control center, WPCS)            |  |
| Inkjet marking                              |  | Material verification                        |  |
| Tube marking                                |  | Wire changer                                 |  |
| Wire draw-in                                |  |  |  |

\* Available on request

## Komax – leading the field now and in the future

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 to 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. Komax uses its extensive distribution and service network, which includes local companies and their employees, to support customers across the world on-site, thus ensuring the availability and value of their investments after equipment commissioning through standardized service processes.



### 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.**

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