ZETA 620 G2

harness manufacturing

komax

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ZETA 620 G2

The Zeta 620 G2 is your strategic entry into high-performance wire processing, delivering maximum output within a minimal footprint of just 2150 × 1545 mm. By automated production entire wire sets – complete with sorted and labeled bundles – it eliminates manual errors and streamlines your workflow.
Benefit from proven Zeta technology and versatile modules that simplify production while ensuring significant time and cost savings. This cost-effective solution provides a decisive, long-term competitive edge in cabinet construction.

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 WIRE Mind 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 seven different ferrules with the CM 1/5 GS and CM04 Duo module

Reliable processing with the highest quality
– Sequential processing of single-conductor wires in the cross-section range 0.5 – 6 mm²
– Consistently high quality thanks to fully automatic production

Attractive entry-level model with a small footprint
– Compact dimensions: 2150 × 1545 mm
– Fits into any production environment
– Up to two inkjet markers can be optionally integrated

EFFICIENT
AUTOMATION IN CONTROL CABINET CONSTRUCTION

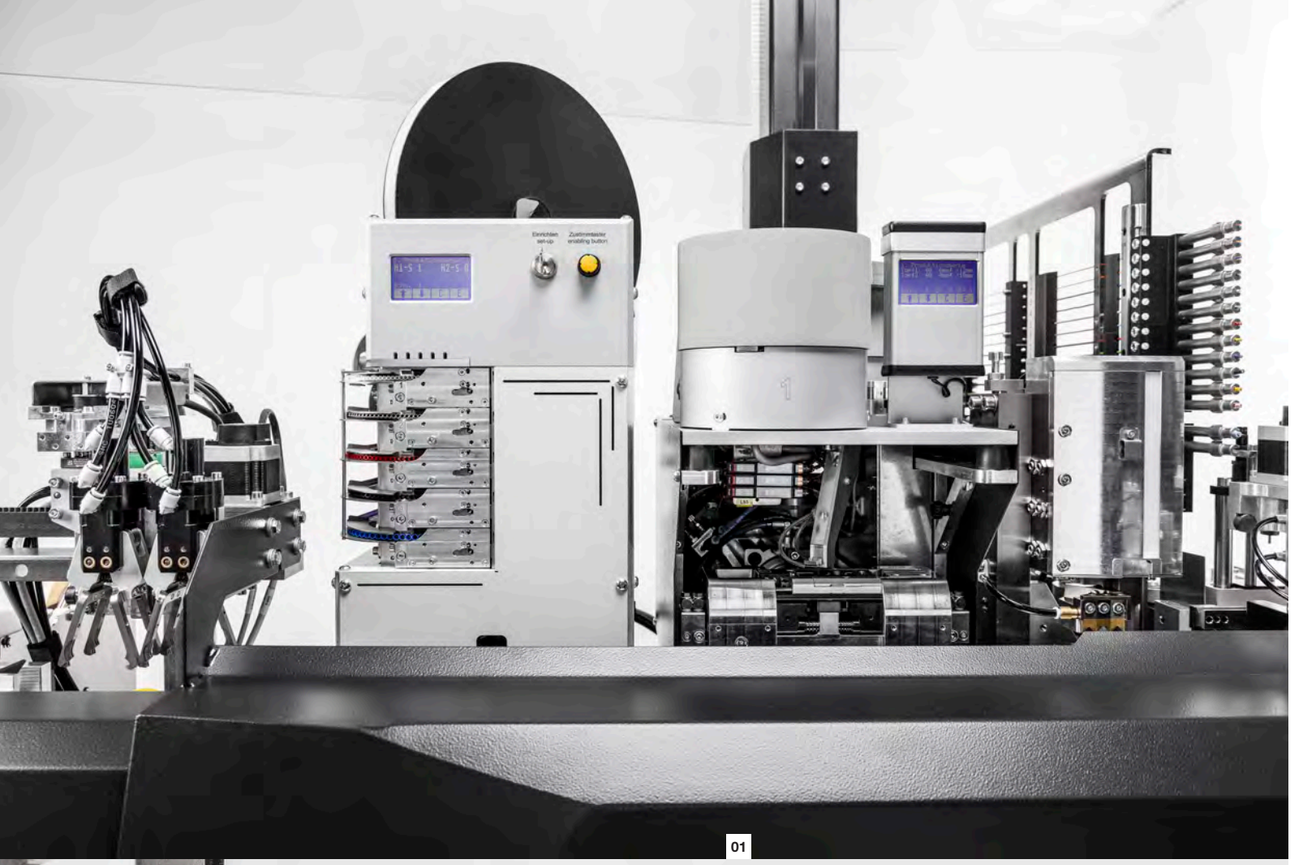
The bundler sorts the batches and fixes the matching wires with adhesive tape in one process step.

HIGH PRODUCTIVITY
FROM A BATCH SIZE OF ONE

Time savings of up to 50 %
Manual processes are time-consuming. The Zeta 620 G2 reduces manual labor to a minimum by automatically producing all required wires. It prepares them in the correct sequence and length—fully processed, including labeling and terminals. The wires then only need to be routed in the control cabinet. Manual tasks such as cutting to length, stripping, labeling, and crimping ferrules 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 MIKO interface. Exporting data from ECAD systems to a cutting list is also possible. This data is converted and input, eliminating the need to manually program articles on the machine. This process 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.



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02

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The Zeta 620 G2 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 a single process step. These wire bundles make routing in the control cabinet quicker and easier. Batches can be removed 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 mm² 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 G2 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 modules then fit them with up to seven different ferrules.

Versatile wire labeling solutions

The system supports the integration of up to two inkjet printers for maximum labeling flexibility. An automatic inkjet selector enables seamless sequential printing in both black and white without manual intervention. Users can choose between inkjet printer from Leibinger IQJET or Domino M1630. For specialized requirements, the M1650 module allows for alternative identification using pre-labeled tubes.

03
With its compact dimensions, the Zeta 620 G2 fits into any production space. The optional inkjet markers are integrated into the chassis via a convenient drawer. Inkjet printer from two different suppliers are available: the Leibinger IQJET or the Domino M1630.

03

Wires equipped easily with seven different ferrules

The CM 1/5 GS is an adaptable, flexible solution for control cabinet construction. Five different reeled ferrules with cross-sections from 0.5 to 2.5 mm² and crimp lengths of 8 and 10 mm can be processed quickly and easily in sequence. Special ferrules (Multinorm, AWG) are also handled without difficulty. The ferrule reels are inserted without tools or changeovers. The touch display is intuitively designed, and a two-stage process ensures reliable results. Automatic cable centering adjusts to each cross-section.

The CM 1/5 GS is a high-performance module that integrates seamlessly into fully automatic Komax machines such as the Zeta 620 G2.

The CM04 Duo supplements the cross-section range for processing wire-end ferrules in the 4 – 6 mm² range. The module makes it possible to process two types of ferrules without changeover. Crimp lengths of 8, 10 or 12 mm can be processed easily and sequentially. The wire centering automatically adapts to the selected cross-section, which ensures reliable processing. In combination with a CM F20 or CM 1/5 GS, wire harnesses with a cross-section of 0.5 – 6 mm² can be equipped with wire end ferrules.

As an alternative to crimping the wire ends with ferrules, we also offer compacting the wire ends using a Schunk module.

Technical data

	CM 1/5 GS	CM04 Duo	Schunk Mimic III*
Cross-section range	0.5 – 2.5 mm² (AWG 20–14)	4 – 6 mm² (AWG 11 – 9)	0.5 – 6 mm²
Ferrules	Z+F Ferrules on rolls, 0.5 – 2.5 mm² (AWG 20–14) Type: N,HL (standard) / S-N,S-HL (Multinorm, AWG)	Z+F Wire end ferrules bulk material, 4 – 6 mm² (AWG 11 – 9) Type: K-N-HL	–
Ferrule length	8 mm and 10 mm	8 mm, 10 mm or 12 mm	–
Compacting length	–	–	5 – 19 mm
Crimp form	Quadro crimp form	Quadro crimp form	–
Operating pressure	5 – 6 bar	5 – 6 bar	–
Electrical connection	1 × 100 – 240 VAC 50/60 Hz	1 × 100 – 240 VAC 50/60 Hz	3 × 400 VAC 50/60 Hz / 3 × 16 A

* Available on request

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

Optimize your work processes with WIRE Mind

To save time in automatic wire production, accurate data and fast preparation are key. This is where WIRE Mind comes into play. Simply select the desired bundling rule and upload your file; the software automatically creates the appropriate wire sets for you. WIRE Mind verifies the values from your wire list and assigns the corresponding labels based on the defined mapping. If needed, you can manually adjust these assignments at any time.

Production-ready sequence and round bundles are automatically generated with the wires correctly rotated. Properties and custom texts are printed automatically on wires or shrink tubes. The direct connection to the Zeta 620 G2 improves efficiency through just-in-time production planning.

Virtual wiring

To automate the wire production in the control cabinet construction process, collecting accurate production data—including wire lengths—is essential. Based on a 2D drawing, technicians can complete the wiring virtually on a screen using WIRE Mind. This is a highly efficient method of determining the exact wire lengths for every connection.

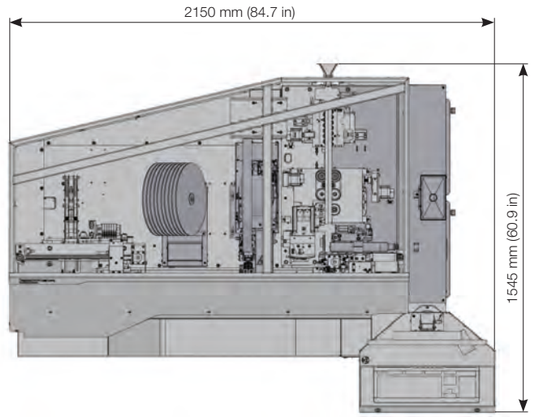
Technical data Zeta 620 G2

Outer wire diameter	Max. 6 mm (0.24 in)
Wire cross-sections	0.5–6 mm² (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	420 pcs/h
Piece output, stripped on both sides	700 pcs/h
Weight	Approx. 700 kg

Module combinations

Station 1	Station 2
M1650 Tube	M1650 Tube CM 1/5 GS CM F20 CM04 Duo AEH-LS Schunk Mimic III*
CM04 Duo	CM 1/5 GS CM F20 AEH-LS CM04 Duo Schunk Mimic III*
CM F20	CM 1/5 GS CM F20 AEH-LS Schunk Mimic III*
AEH-LS	CM 1/5 GS AEH-LS Schunk Mimic III*
CM 1/5 GS	CM 1/5 GS Schunk Mimic III*

* Available on request



Machine height with closed safety cover 1765 mm (69.5 in.)
Machine height with open safety cover 2765 mm (108.8 in.)

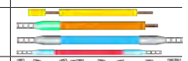
Example of bundled wires with tube labeling. The tubes can be rotated and simplify wiring in the control cabinet.

Options and accessories

Marking systems	IQJET • M1630 Jet • M1650 Tube tube marking module
Wire draw-in	Wire changer 24-fold
Process modules	Ferrule module CM F20 • CM 1/5 GS • CM 04 Duo • AEH-LS • Ultrasonic welding Schunk Minic III*
Software	MIKO networking interface • WPCS networking interface • WIRE Mind • TopConvert data conversation • DLW

* Available on request

Processing capabilities

Cutting		Inkjet marking	
Cutting pulled strands		Tube marking	
Full stripping		Wire deposit system/spot taping	
Partial stripping		Sequence processing with autom. wire selection	
Ferrule crimping			
Wire end solidifying, splicing, welding*			

* Available on request

Komax – leading the field now and in the future

As a pioneer and market leader in automated wire processing, Komax provides its customers with innovative solutions. Komax manufactures series and customer-specific machinery, catering to every degree of automation and customization. Its range of quality tools, test systems, and intelligent software and networking solutions complete the portfolio, and ensure safe, flexible, and efficient production.
Komax is a globally active Swiss company with highly qualified employees and development and production facilities on several continents. It provides local support to customers worldwide through its unique sales and service network and offers services that help them get the most out of their investments.

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