



GAMMA 448

crimp to crimp

komax

GAMMA 448

The compact, fully automatic Gamma 448 processes crimps and seals on both sides and takes up minimum space. It guarantees high production availability and traceable quality. The wire processing machine has all the necessary key functions and can also be extended for specific purposes using an extensive range of options. High-performance modules ensure seamless quality monitoring. Optimized quick-change systems reduce set-up and changeover times. Handling is intuitive and ergonomic – easy and error-free thanks to the Komax HMI operating software. This combination contributes significantly towards achieving stable and optimal productivity.

High level of process stability and comprehensive monitoring

- New machine platform based on tried-and-tested Alpha technology
- Complete quality monitoring, thanks to a fully integrated quality concept
- Reliable processing of wire sections ranging from 0.13-4mm²

Fast setup and changeover

- Quick manual wire change
- Short replacement times for tools and terminals thanks to STC
- Reduced changeover times thanks to machine operation at the crimp module

Compact machine design and efficient operation

- Simple and user friendly
- The machine design meets global ergonomic requirements
- Komax HMI software with Green Button for error-free and efficient production
- Comprehensive transparency across the entire production process

Cost-effective maintenance

- Conveyor belt can be used on both sides
- Good machine access for short maintenance times
- Common - parts strategy with Alpha 530/550 reduces complexity and costs for spare parts

BEST-IN-CLASS SETUP AND CHANGEOVER



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01
Fast cable insertion without cross section-dependent guide elements.

02
The stationary quick terminal changer STC (optional) reduces changeover times.

MAXIMUM QUALITY ASSURANCE AND EFFICIENCY



**C1370/C1360/
C1340**
CRIMP MODULE



Q1240
STRIP MONITORING



S1441/ S1438
SEAL MODULE



Ergonomic working conditions, logical workflows and the simplest possible user guidance all promote a cost-effective production process. Maintenance costs have been optimized by having a common-parts strategy. This makes the machinery less complex, brings down costs for spare parts and reduces training requirements.

Gamma 448 – exceptionally economical

The Gamma 448 fulfills all the requirements of future-proof, cost-effective wire production. The precise modules and functions required can be customized individually on four stations. With these supplementary options, the compact machine provides the required functional scope, powerful performance and seamless quality monitoring.

Maximum availability and efficiency

The Gamma 448 processes crimps and seals with cross sections of 0.13 to 4 mm² on both sides. The proven, robust technology ensures continuous machine availability with minimal downtimes. Shorter routes and stringent processes between work zones improve the workflow and the productivity. Operation of the machines is aided by optimal lighting in the work areas and dimensions that are adapted to suit global standards.



01

REDUCED TO THE MAX



03



02

- 01** Intuitive, correct operation thanks to Komax HMI operating software
- 02** Useful option: the quick-change wire draw-in
- 03** Quick, secure set-up directly on the module

Fast setup and changeover

The optional STC tool and terminal reel quick-change system enables the terminal rolls and crimp tools to be changed during operation. The time-saving insertion of the wire into the belt drive takes place without the need for additional cross-section dependent guide elements. The option to use both sides of the drive roller ensures it has an above-average service life.

Full quality assurance and traceability

All integrated and optional modules and functions ensure seamless quality control. Perfectly coordinated with each other, they meet the high demands of the automotive industry. Integration with the MES manufacturing execution system provides documented traceability. The integrated CFA+/CFA crimp force monitoring detects missing individual wires and crimped insulation.

The optional automatic conductor detector (ACD) ensures quality, even for the finest conductors. It detects the slightest contact between the blades and conductor strands during cutting and stripping. The Q1240 quality tool monitors strip quality and seal insertion and automatically rejects defective products.

Simple and flawless operation with Komax HMI

Supported by the user guidance in the HMI operating software, the Gamma 450 can be set up in just a few steps. The large touchscreen makes operation of the HMI user interface easy. The use-case-driven design of HMI also ensures error-free data input while the Komax Green Button guides the user through the wire processing step by step.



Q1240 strip quality monitoring for maximum quality

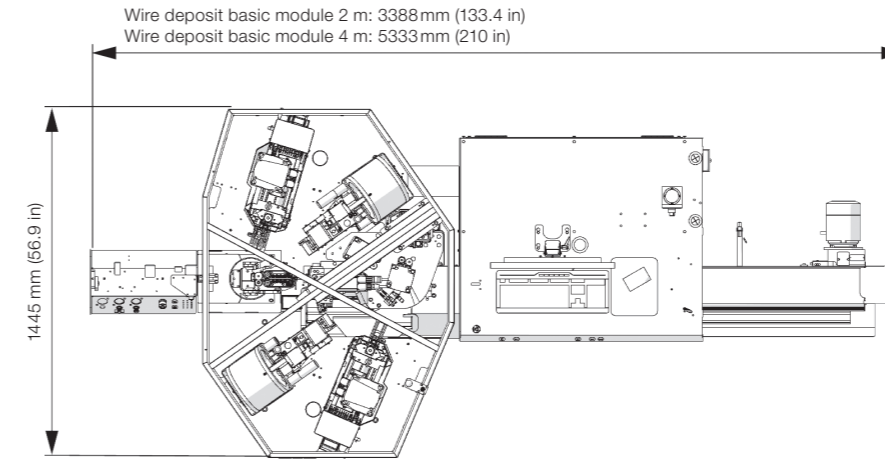
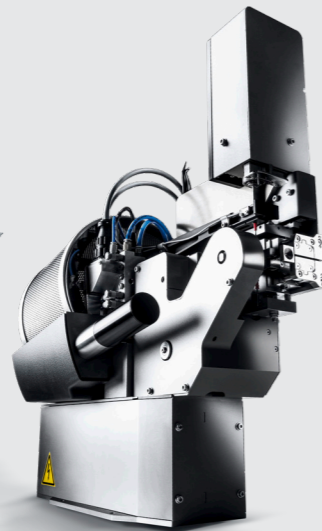
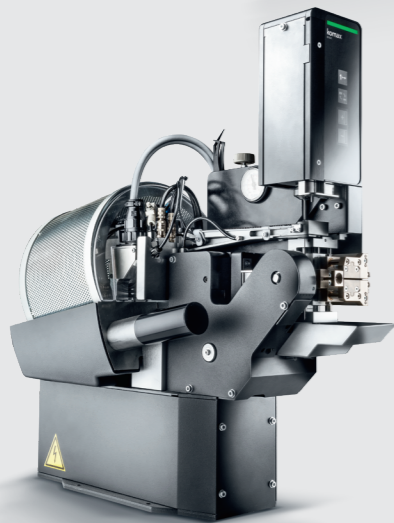
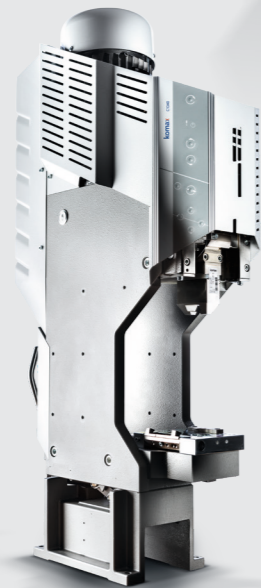
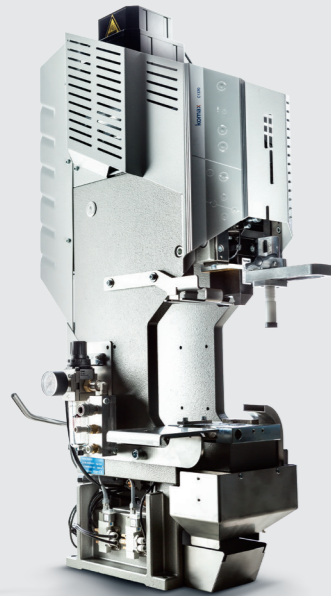
The Q1240 quality tool visually monitors strip quality and seal insertion. Product quality can be traced end-to-end via statistics, image capture and network feedback.

Tried and tested C1370/1360/1340 crimp modules with CFA+/CFA

The efficient user guidance and wire positioning directly on the module allows the shortest setup and changeover times. CFA+/CFA- guarantees the highest quality and minimal rejects. Combined with the time savings, this can increase productivity considerably. Features like the stroke and split cycle can be programmed easily. The C1370 and C1360 adjusts the crimp height automatically during programming.

S1441/ S1438 seal module for maximum flexibility

The module automatically fits wires with conventional seals and mini-seals. The combination of precision mechanics and the new seal position monitoring function guarantees a high degree of process safety and maximum productivity. The module can be simply and quickly switched from one seal variety to another.



Height with closed hood: 1775 mm (69.9 in)
 Height with cover completely open (maximum opening): 2775 mm (109.3 in)
 Lower wire lines of 90 mm compared to Alpha 530/550

Technical data

Wire cross-sections	0.13 – 4 mm ² (AWG 26 – AWG 12)
Wire outer diameter	max. 3.9 mm (0.15 in)
Length range	60 – 65'000 mm (2.35 in – 213 ft)
Full strip	0.1 – 16.5 mm (0.004 – 0.65 in)* With optional double blade up to 29 mm
Partial strip	0.1 – 16.5 mm (0.004 – 0.65 in)* With optional double blade up to 21 mm (S1) and 29 mm (S2)
Crimp force	1 – 22 kN
Process modules	Side 1 and side 2: 2 stations
Noise level	< 80 dB (without crimp tool)
Electrical connection	3 x 208 – 480 V; 50/60 Hz; 2.5 kVA or 3 x 400 V, 50/60 Hz, 2.5 kVA
Compressed-air connection recommended operating pressure	5 – 8 bar (73 – 116 psi) 6 ± 0.5 bar (87 ± 7.25 psi)
Air consumption of crimp / crimp seal crimp / seal crimp	< 6 m ³ /h (212 ft ³ /h) < 9 m ³ /h (318 ft ³ /h)
Weight (incl. 2 crimp modules + 2 seal modules)	920 kg (20828 lbs.)

* Depending on the nature of the cable material
 ** Repeat accuracy ± (0.2 % + 1 mm [0.04 in])

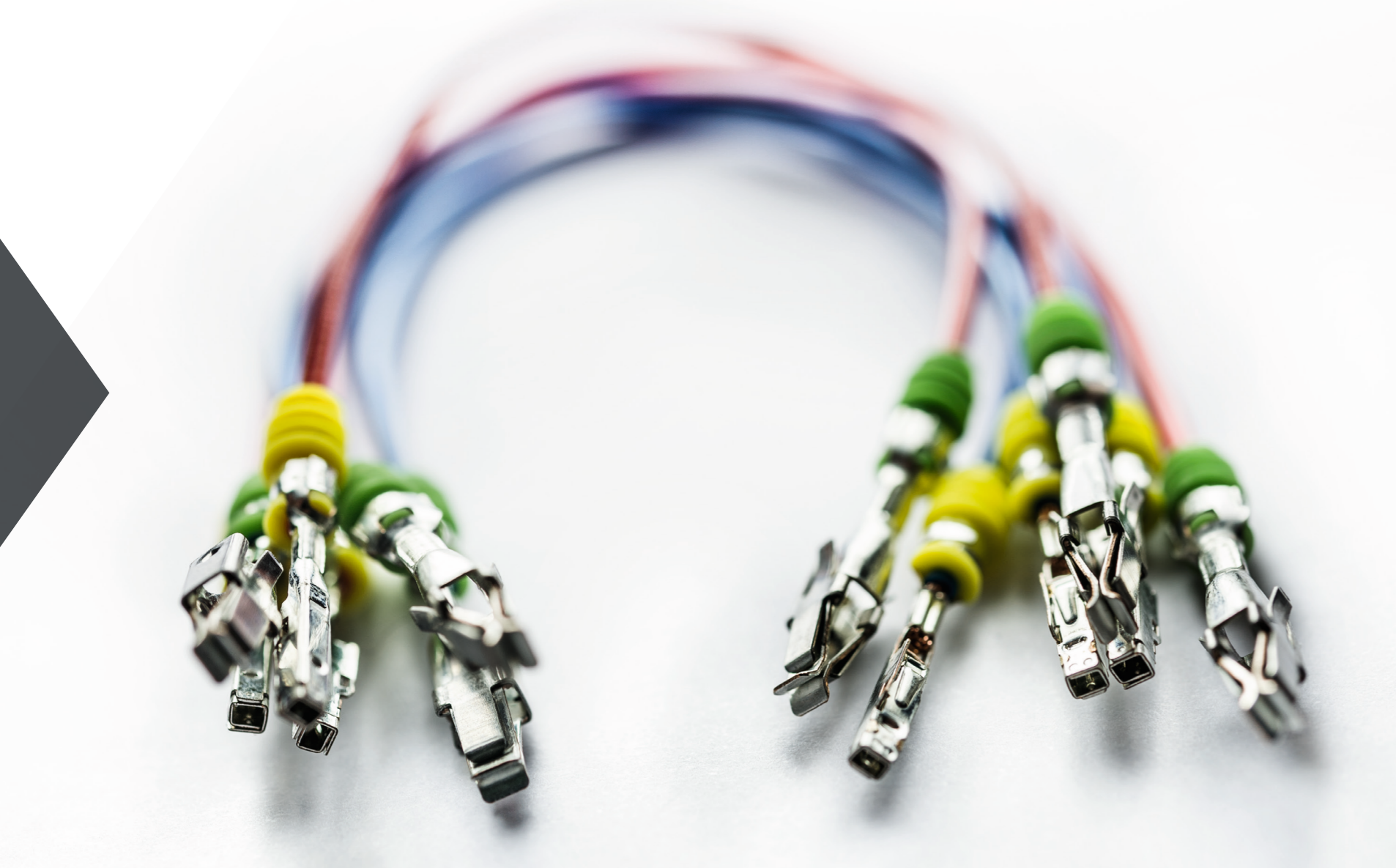


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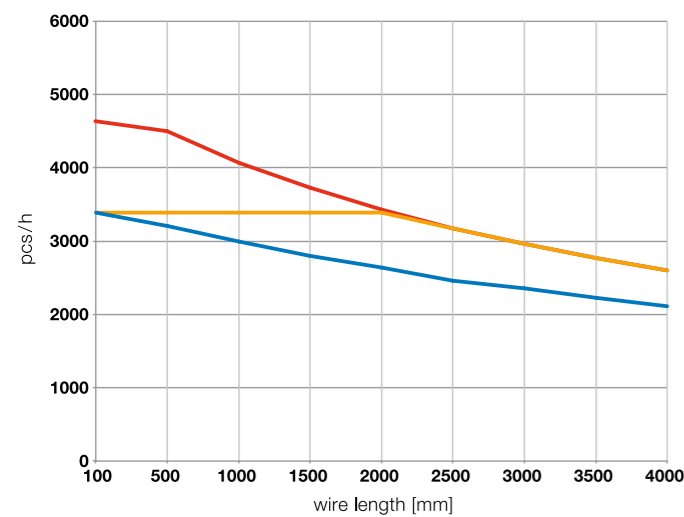
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01 Absolutely precise processing thanks to the double blade holder and automatic conductor monitoring (ACD).
02 Tools are always available in the practical, lockable drawer.



Double-ended crimping and seal insertion.

Output rate



FLRY conductor	0.5 mm ² (AWG 20)
Pneumatic pressure	6 bar (87psi)
Crimp module	C1370
Seal module	S1441
Crimp force monitoring	Active
ACD, Q1240	Inactive
Deposit gripper	Active

- Crimp/Crimp
- Crimp-Seal/Crimp
- Crimp-Seal/Crimp-Seal

The actual piece output may vary depending on the application and machine configuration

Options and accessories

Prefeeder	Prefeeder **
Wire drive	Belt drive
Marking systems	Komax inkjet printing systems **
Blade holders	Single-blade line for V-blades • Double-blade line for V-blades and special blades
Process modules	C1370/C1360/C1340 crimp module • S1441 seal module • Double gripper module **
Quality assurance	Integrated crimp height measurement • Integrated pull-out force measurement • ACD automatic conductor detector • Q1240 strip and seal monitoring • CFA+/CFA crimp force monitoring • Material change detection • Material verification • Splice detection • Terminal end detection
Deposit systems	Base module 2 m (78.7 in) or 4 m (157.5 in) • Extension module 2 m (78.7 in) or 4 m (157.5 in) • Deposit gripper
Accessories	Stationary tool and terminal reel quick-change system • Wire quick-change system
Software	MIKO networking interface • Komax HMI

Processing examples

Cutting to length		Wire draw-in	
Cutting pulled strands		Wire deposit	
Full stripping		Incision monitoring	
Half stripping		Stripping, terminal and seal monitoring	
Crimping		Crimp force monitoring	
Double crimping **		Crimp height measurement integrated	
Split cycle function for closed terminals		Pull-out force measurement integrated	
Seal insertion		Wire length correction	
Material change detection		Splice monitoring	
Crimp tool – terminal – quick-change system		Good/bad separation	
Wire changer		Production in sequences	
Programmable crimp height		Batch separation	
Inkjet marking **		Networking	
Prefeeder/dereeler **		Customer-specific processes *	

* Available on request ** Available with HMI release 19.X

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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